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CONTENTS

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NOTES

IT HAS BEEN STATED BY A DISTINGUISHED ARCHAEOLOGIST THAT INDIAN ARCHAEOLOGY, having undergone the first stage—one of limited knowledge and restricted inference—is at the present time passing through the difficult second stage, when there is an accumulation of scraps of evidence tending to constitute an incoherent heap. The third stage will be reached when this heap has sufficiently grown and matured and has taken an assured place in the landscape.[1]

There is no doubt that the heap will continue to grow, if in an untidy way, before the stabilization of the third stage takes place. This is perhaps inevitable in the archaeological history of any country of large dimensions and with a varied past. A firm comparative stratigraphy can be produced only when the third stage is reached.

* * * * * *

At the same time, the broad outlines of the early cultures of a few parts of the country are already drawn on the archaeological horizon, though not only have the details, at present faint, to be filled therein, but the outlines themselves have to be made firm and fixed to their proper chronological positions. For the latter purpose, a few dates much more definite than those hitherto known—mostly on the basis of foreign contacts and affinities—are an absolute necessity. In this context, the recently-available Carbon-14 datings of objects from three excavations are of great import, even with allowances for all the limitations of the method.[2]

One of the sites is Navdatoli on the Narmada, under excavation by the Deccan College Post-graduate and Research Institute in collaboration with the University of Baroda and the Government of Madhya Pradesh—a site with five Phases of chalcolithic occupation.[3] The ages of five objects, two from Phase I and one each from Phases II to IV, as

[1] Mortimer Wheeler in Bendapudi Subbarao, *The Personality of India*, 2nd ed. (Baroda, 1958), p. viii.
[2] For example, F. E. Zeuner, *Dating the Past*, 4th ed. (London, 1958), p. 341.
[3] *Indian Archaeology, 1957-58—A Review* (1958), p. 30; *ibid., 1958-59* (1959), p. 30.

obtained in the laboratory of the University of Pennsylvania by the Carbon-14 method, are as follows:[1]

1. Charcoal (Phase I), 3457 years Before Present ± 127.
2. Charcoal (Phase I), 3492 years Before Present ± 128.
3. Charcoal (Phase II), 3503 years Before Present ± 128.
4. Charcoal (Phase III), 3449 years Before Present ± 127.
5. Burnt wheat (Phase IV), 3294 years Before Present ± 125.

Let us examine how these dates compare with the rough archaeological dates that have held the field till now. From the facts that the chalcolithic deposits at Navdatoli were found overlain by those bearing the Northern Black Polished Ware, that the former deposits were seen to represent the cultural débris of five Phases and that from Phase III was recovered pottery having affinities with that from Iranian sites, for example Sialk, a date ranging from 1200 to 700 B.C. was proposed for the chalcolithic settlement at the site. This date was felt to be fairly consistent with the evidence from western India, in which region, at such sites as Rangpur, some material comparable with that from central India had been found in the post-Harappan deposits. In view, however, of the Carbon-14 datings now available, both the upper and lower limits of the date have to be pushed back by about four centuries. How this will react on the other cultures of the second millennium B.C., including the late phase of the Harappa culture of Gujarat, through the post-Harappan levels of Rangpur, has to be examined in detail. Steps have been taken to obtain direct Carbon-14 dates for the objects from Lothal, the chief Harappan site in Gujarat.

* * * * * *

The 'Jorwe Ware', the typical pottery of the chalcolithic culture of the upper Deccan, provides a link between the Narmada and Godavari valleys: according to the excavators, the Ware made its first appearance at Navdatoli in Phase III. Whether this should mean the seniority of the Narmada culture to the Godavari one, or merely indicate the absence of contacts between the two in their earliest stages cannot be determined at present. The only available Carbon-14 dating for chalcolithic material from the Godavari valley—that of a piece of charcoal from Nevasa declared, by the laboratory mentioned above, to be 3106 years in age Before Present ± 122[2]—is insufficient to confirm or reject either alternative.

* * * * * *

A datum-line is now provided to the early archaeology of the lower Deccan by the Carbon-14 dating of a piece of charcoal obtained in the excavation, by the Director of Archaeology of the Government of Andhra Pradesh, at an ash-mound site near Utnoor in District Mahbubnagar, which, from the limited information[3] available at the time of writing these Notes, appears to represent a neolithic settlement. The age of the sample, examined in the laboratory of the British Museum, has been declared to be 4120 years Before Present ± 150.

[1] Information from Dr. H. D. Sankalia; also Subbarao, *op. cit.*, p. 129.
[2] Information from Dr. H. D. Sankalia.
[3] Information from Dr. P. Sreenivasachar; also *Indian Archaeology 1958-59—A Review*, p. 11.

The beginnings of the chalcolithic occupation of Brahmagiri, not far away from Utnoor, have been dated to the early first millennium B.C.[1] It has been felt that the chalcolithic element—the tradition of painted pottery, the crested-ridge technique of blade-manufacture and the limited use of copper—of such sites as Brahmagiri and Maski was an import from the north and a superimposition upon the true neolithic culture of the south, as is represented in the pre-chalcolithic strata of Sanganakallu and, to judge from the incomplete information, at Pikhlihal and the site near Utnoor. In the reverse direction, the south might have lent to the north its polished stone axe, which accounts for only a restricted part of the chalcolithic equipment of the Narmada-Godavari; as it is absent in that region as an independent culture-component prior to the chalcolithic, it may be reasonably regarded as an intrusion there. The priority of the Sanganakallu-Pikhlihal-Utnoor culture to the Navdatoli-Jorwe-Nevasa, now established by Carbon-14 dates, is therefore in full consonance with archaeological inferences.

A. GHOSH

[1] *Ancient India,* no. 4 (1947-48), p. 202.

SANUR 1950 & 1952: A MEGALITHIC SITE IN DISTRICT CHINGLEPUT

By N. R. Banerjee and K. V. Soundara Rajan

CONTENTS

1. INTRODUCTORY

THE EXCAVATION DESCRIBED HERE WAS CARRIED OUT DURING TWO SEASONS, IN 1950 and 1952, by the Southern Circle of the Department of Archaeology. In the first season, the second author was primarily responsible for the work, while in the next the work was jointly carried out by him and the first author, with the latter in general charge.

The excavation marked the culmination of the work of exploration of megalithic sites in Chingleput District, which had been started by the Department in 1944 and completed in 1948 under Shri V. D. Krishnaswami, resulting in the discovery of about two hundred new megalithic sites in that District. The field-data gathered in the exploration were as follows.

The District, covering over 3,000 square miles, may broadly be divided into two geological regions, viz. the northern lateritic region, comprising the Taluks of Ponneri,



General view of the megalithic site. *See p. 6*



General view of the megalithic site. *See p. 6*

Tiruvallur and Sriperumbudur (1,466 sq. miles), and the southern granitic region, with the Taluks of Kanchipuram, Saidapet, Chingleput and Madurantakam (1,654 sq. miles). The nature of the rocks in the two regions affected the structure of the megaliths comprised in them. The softer laterite of the north enabled the tomb-builders to raise slab-cist chambers, while the more intractable granite of the south was employed in its rough irregular form, with the exception of roughly-hewn granite slab-cists here and there. The clue to the discovery of megalithic sites is provided in both cases by the juxtaposition of hillocks, rocks or mere outcrops thereof with remnants of large irrigation-tanks lying along the natural configuration of the land as indicated in the survey-maps. The tanks irrigated in the olden days the arable lands in the neighbourhood and thus helped to sustain the population, whose dead were buried in the megalithic tombs, and the rocks supplied the material for the construction of the tombs, which are generally found in the rocky high ground unfit for cultivation.[1]

As a result of the exploration, the following types of megaliths were identified in the District:[2]

1. CAIRN-CIRCLE, consisting of a cairn-heap made of rubble of granite chips or pebbles and enclosed by a circle of granite boulders; called type C in the nomenclature adopted by the Department.

2. DOLMENOID CIST, built of dressed slabs of stone for orthostats with a prepared capstone; called type D1. The type is restricted to the lateritic region of the District.

3. DOLMENOID CIST, as above, but made of rough boulders for orthostats and with a flattish capstone, the structure rising above the cairn; called type D2. This and the following types are restricted to the granitic region.

4. DOLMENOID CIST, similar in structure to the above but with the capstone nearly flush with or just resting on the cairn-heap; called type D3. And, lastly,

5. BARROWS, which are low mounds without the megalithic appurtenance of stone circle and are distinguished by a scatter of granite chips over the surface.[3] Exposed examples of this type show embedded burial-urns with pedunculated bottom, resembling the human womb, or legged terracotta sarcophagi.

All the above types, except the last, are circumscribed by a circle of stones, which retains a packing of rubble and earth, cumulatively called cairn, heaped up over the interment. The cairn-circles, from surface-evidences, were hitherto expected to contain burial-urns, single or multiple, while the cists were seen to have contained terracotta sarcophagi, again single or multiple, besides other funerary furniture.

The main objective of the excavation at Sanur was to ascertain the nature of the structures and contents of the types of megaliths met with in the course of exploration in the District and thus to obtain a picture of the varieties represented by the megalithic tombs in the area, together with dating evidence, if available. In a sense, the excavation was a continuation of the megalithic excavation at Brahmagiri done by the Excavations Branch of the Department in 1947 in collaboration with the Archaeological Department

[1] Cf. N. R. Banerjee, 'The megalithic problem of Chingleput in the light of recent exploration', *Ancient India*. no. 12 (1956), pp. 21-34.

[2] V. D. Krishnaswami, 'Megalithic types of south India', *Ancient India*, no. 5 (1949), pp. 35-45.

[3] The 1955-excavation at Amirthamangalam in Ponneri Taluk of Chingleput District has thrown some light on the contents of the barrows. *Indian Archaeology 1954-55—A Review*, pp. 20-22, and Banerjee, *op. cit.*, p. 31.

of Mysore State.[1] A notable difference was that here, unfortunately, there was no habitation-site near by and, therefore, no possibility of correlating the megaliths with habitational relics.

2. ACKNOWLEDGEMENTS

Grateful acknowledgement should be made of the help and general guidance rendered by Shri V. D. Krishnaswami and Shri K. R. Srinivasan, successive Superintendents of the Southern Circle, and of the part taken by Shri K. Ramaswamy, Draftsman-Surveyor, Shri P. Bhaskaran Nair, Circle Draftsman, and Shri V. Munuswamy Naicker, Circle Photographer, both now retired. Shri K. S. Ramachandran, now Excavation Assistant in the Excavations Branch, took an active part in both the seasons and also helped preparation of the report. Shri H. K. Bose, Assistant Anthropologist, Department of Anthropology, whose report on the human and animal bones found during the excavation is published here (pp. 40-42), helped us immensely during both the seasons of work, besides favouring us with his report. Thanks are due to Dr. S. Paramasivan, Assistant Archaeological Chemist, now retired, for giving first-aid treatment to the excavated iron objects and for helping in lifting them. We would also like to acknowledge with thanks the work of Shri Lakshmi Dutt, Head Draftsman of the office of the Director General of Archaeology in India, and Shri R. P. Khare, Shri H. N. Sajnani and especially Shri Lalit Kumar Jain, Draftsmen of the Excavations Branch, in the finalization of the line-drawings published here.

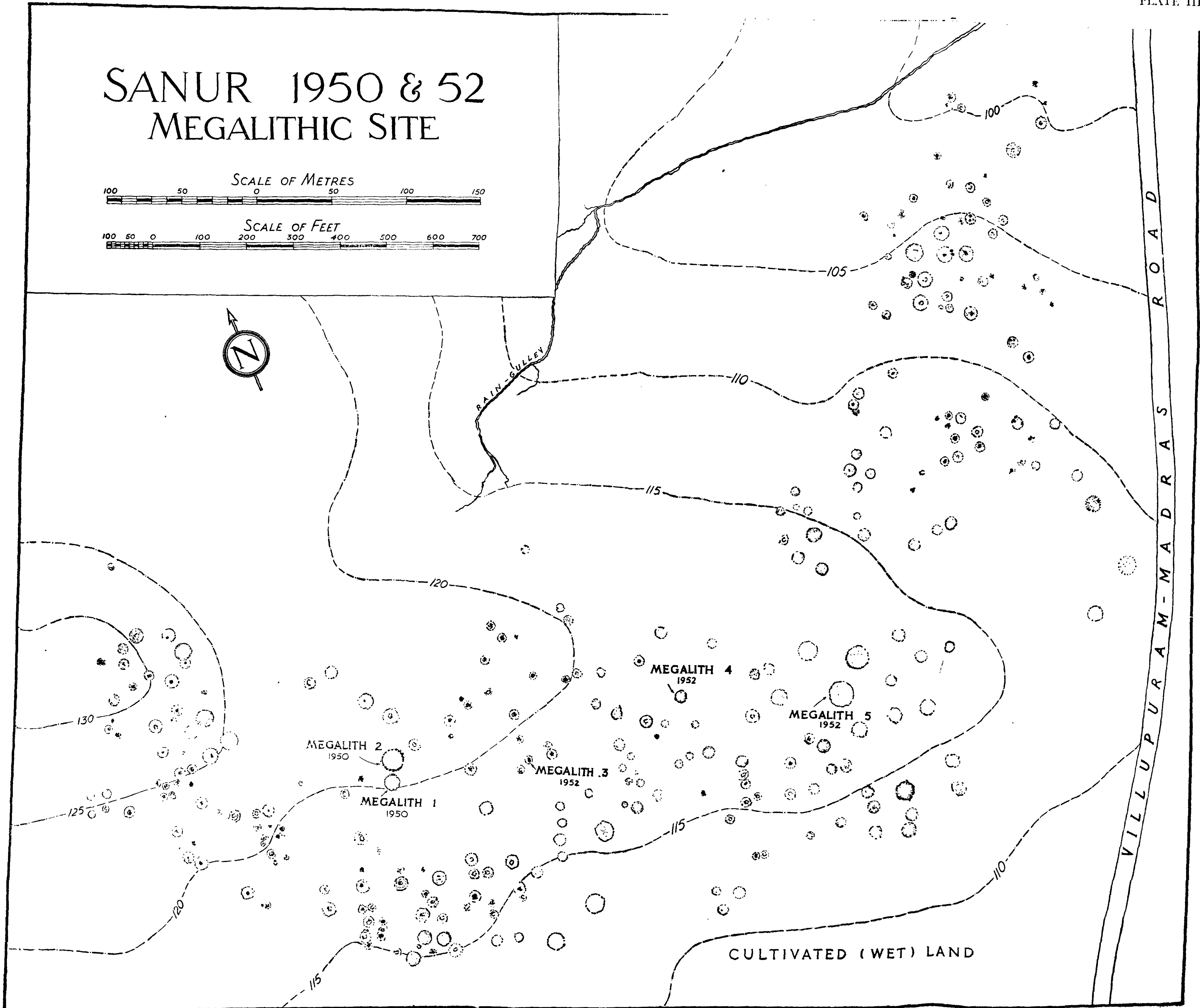
3. THE SITE (pls. I-III)

The site of Sanur, 12° 33′ 5″ N. Lat. and 79° 55′ 0″ E. Long., in Madurantakam Taluk, District Chingleput, consists of an extensive high ground, 44·93 acres in area, lying to the west of the Madras Trunk Road at milestone 45 and flanked by hills on the west. The ground is extensively covered with megaliths amidst low rocky outcrops hidden by a thick growth of shrubs of the Reserved Forest. The concomitant tank is situated to the north-east and covers a wide expanse irrigating a considerable arable area, locally called *ayacut*. Except the barrow and the slab-cist stone circle, both characteristic of the northern lateritic regions, all the other types of megalithic monuments enumerated above (p. 5), viz. the cairn-circle, the dolmenoid cist and the dolmenoid cist with capstone flush with the cairn, occur here, their total number being upwards of three hundred. Their contents and promiscuous distribution over the site indicate that they were the products of a homogeneous culture.

4. SUMMARY OF THE RESULTS

The two seasons' work at Sanur covered almost all the important representative types of megalithic monuments in the southern region of Chingleput District. That region is granitic, while the northern one is lateritic: geology has determined the form of monuments in the two regions. Except the barrows, which occur only in the northern region, the other types of monuments are invariably circumscribed by a bounding circle and covered by a cairn-heap of rubble and clay.

[1] R. E. M. Wheeler, 'Brahmagiri and Chandravalli 1947 : megalithic and other cultures in the Chitaldrug District, Mysore State', *Ancient India*, no. 4 (1947-48), pp. 181-310.


SANUR 1950 & 52
MEGALITHIC SITE
SCALE OF METRES
100 50 0 50 100 150
SCALE OF FEET
100 50 0 100 200 300 400 500 600 700
N
RAIN-GULLEY
100
105
110
115
120
125
130
MEGALITH 2
1950
MEGALITH 1
1950
MEGALITH 3
1952
MEGALITH 4
1952
MEGALITH 5
1952
CULTIVATED (WET) LAND
VILLUPURAM-MADRAS ROAD

To face p. 6

The monuments occur on the unarable rocky slope, rocky high ground or foot of hillocks, in association with large irrigation-tanks and cultivable land in the neighbourhood. Unfortunately, it has not been possible to trace in the District any habitation of the people who have left these megalithic relics. Even so, it is fairly clear that the megalithic folks were an agricultural people, who depended upon bunded rain-water for irrigation. (Incidentally, it may be stated that this mode of irrigation is still in vogue in south India.) They also protected arable land from being encroached upon by megalithic tombs.

The surface-observations made during the exploration of the District were to a certain extent corroborated by excavation, but excavation also showed that superficial indications were not always a safe guide for the classification of megaliths. Thus, two of the five excavated megaliths at Sanur, superficially classified as cairn-circles and expected to contain either urn-burials or sarcophagi, turned out to be two different types of monuments not met with in the course of explorations.

Megalith 5, though superficially classified as a cairn-circle, appeared on excavation to be a very interesting type of monument, and instead of containing burial-urns, single or multiple, it entombed a pit-burial, 7 ft. 6 in. deep. The contents included appreciable quantities of skeletal material, including skulls, a large number of pots, iron objects and shell ornaments. All of them were interred at one stage, and the space inside was gradually filled up with loose earth and, when the process of interment was complete, was sealed by two successive layers of earth leading to the emergence of the tumulus of clay and rubble.

Megalith 4, almost similar in appearance to Megalith 5, contained an incipient dolmenoid cist-chamber enclosing a legged sarcophagus laid on the surface of the earth. Though it contained some broken bits of pottery, it had no trace of bones, and its contents appeared to be crushed and damaged, apparently owing to an accident.

The excavation also showed that there was possibly no real distinction between types D2 and D3 of dolmenoid cists (p. 5), differential exposure by erosion and deliberate or casual removal of the cairn-heap, which originally covered the tomb, being the cause of the present exposed appearance of monuments of type D2. Thus, Megalith 3, of type D2, tends to stand out from Megaliths 1 and 2, of type D3, only superficially.

The dolmenoid cists, of which two, Megaliths 1 and 2, had capstones flush with the cairn-heap, were made of vertical boulders of rude stone (orthostats), four to seven in number, planted on the surface of the contemporary ground-level and roughly forming a pentagonal enclosure. All of them were seen to have a gap, which varied from 2 ft. to 2 ft. 7 in., on the eastern side and corresponded to the port-hole on the eastern orthostat of the slab-cists of Brahmagiri and elsewhere. Considering the evidence at hand, it is clear that the passage at Sanur was functional as Wheeler has suggested in the case of port-holes of dolmenoid cists of Brahmagiri, but the dwindling of the port-holes to a diameter of 4 to 5 in. in Hyderabad, as observed by Meadows Taylor,[1] points to some function other than the introduction of grave-goods. The passaged dolmenoid cists are apparently of the same class as port-holed cists and have therefore to be added to the published list of these monuments,[2] though perhaps with a different symbol. The dolmenoid cist-chamber had a definite east-west orientation.

Megalith 3 had only one sarcophagus but contained no skeletal remains. The other grave-goods included nearly fifty pots and three iron objects.

[1] M. Taylor, 'Description of cairns, cromlechs, kestvaens and other Celtic, Druidical and Scythian monuments in the Dekhan', *Trans. Roy. Irish Academy*, XXIV, pt. iii (1862), p. 331.

[2] Wheeler, *op.cit.*, pp. 180 and 305-10.

Megalith 2 was structurally slightly later than Megalith 1. The process of interment was simple and was in the same sequence as in the other dolmenoid cists. Megalith 1 did not contain any skeletal materials, but Megalith 2 did. Both were otherwise similar to each other except for the absence of pottery in the sarcophagi in Megalith 2. Megalith 2 had three sarcophagi and Megalith 1 five.

Gordon Childe has enumerated the sepulchral function as one of the attributes of megalithic monuments.[1] In this context his observation that collective burial was a distinctive trait of the dolmen or megalithic complex would, strictly speaking, exclude the Indian megalithic tombs from the category of megaliths, as they do not contain the large number (forty or fifty) of skeletons found entombed in the western megaliths, which served as vaults for families or clans and were used repeatedly for successive burials. In the Indian megaliths, while more than one skull is a common feature, the number is never so many as in Europe, though analogy exists in respect of some other features, e.g. the functional portal, passage or port-hole. There is no evidence of a repeated use of the tombs either at Brahmagiri or Maski. The Sanur evidence is also clear. Of the five excavated monuments, two, viz. Megaliths 2 and 5, had appreciable interments of human skeletal relics, collected from the remains left after the exposure of the body elsewhere. Among the rest, though a few fragmentary bones were found in Megalith 1, the other two were devoid of skeletal relics. Nevertheless, the similarity in the structure of the excavated megaliths, their promiscuous commingling, the similarity of the buried objects, consisting of the Black-and-red Ware and iron objects, and the presence of sarcophagi in all of them (except in Megalith 5) point indisputably to the sepulchral nature or intent of even those monuments which did not contain bones, their absence in such cases being probably due to some accident.

Several stages in the process of the construction of the dolmenoid cists can be inferred from the available evidence. The cist-chamber would be the first structure to go into shape, followed by the erection of a ring of stones around it. The grave-goods, besides skeletal remains, mostly consisted of pottery and iron objects. Apart from the sarcophagi, which must have been placed in position from the top, all the goods were presumably introduced through a gap left in the eastern wall of the stone chamber. This gap would then be blocked and the composite structure encased in a cairn of rubble and clay. Next, to seal the burial and prevent any disturbance to it, a capstone, brought over the ramp provided by the cairn, would be hoisted on the orthostats. Finally, on the capstone would be placed a covering of rubble and clay, which completely and finally hid the burial from view. For several probable reasons the top packing has disappeared in many cases, imparting to the capstones the look of having been flush with the cairn.

Sometimes, as in the case of Megalith 3, the orthostats were reinforced by a buttress of a protective circle of stone within the outer bounding circle and were also provided with a passage on the eastern side.

The outer circle of stones was sometimes reinforced by a packing of clay and rubble on the exterior.

The iron objects found in the megaliths are mostly weapons of war and suggest that the folks were warlike and had always to be on the alert. The presence of horse-bits among them indicate the use of horse. The profuseness of iron objects and their fairly sharp outlines point to the people's developed skill of forging, not to speak of the knowledge of mining and smelting.

[1] V. G. Childe, 'Megaliths', *Ancient India*, no. 4 (1947-48), pp. 5-13.



A. *Megalith 4, before excavation.* *See p. 10*



B. *Megalith 4, during excavation.* *See p. 10*



A. *Megalith 4, details of dolmenoid cist.* *See p. 10*



B. *Sarcophagus and other remains in dolmenoid cist.* *See p. 10*

The presence of terracotta beads and an animal figurine, etched carnelian beads, a ball of quartz and shell ornaments limitedly evidence the life of the people.

The megalithic monuments, from their mere size, could not have been produced by individual effort and therefore signify a community-living as well as a concerted effort, resulting in the construction of the monuments. These presuppose some established norms of social behaviour.

Though the excavation has thrown light on the construction of the megalithic tombs, no specific conclusions can yet be drawn about their chronology beyond lending some support to the existing views on the subject (see below). The skeletal relics were so utterly fragmentary or crushed that the chances of deriving conclusions on their racial affinities are rather remote.

5. CHRONOLOGY

The excavation at Brahmagiri enabled archaeologists to fix the date of the megaliths in Mysore as 200 B.C. to A.D. 50.[1] Again, on superficial grounds of similarity between two pots recovered from a megalith in Perumbair in Chingleput District by Alexander Rea in 1905[2] and the pots bearing characteristic designs of wavy lines in yellow on a russet surface found in a cist at Sulur in Coimbatore District, which also contained a coin assigned to the third-second century B.C.,[3] the Chingleput megaliths are to be approximately dated to the same period. The apparent similarity of certain other objects, like iron objects and the Black-and-red Ware, may not necessarily be a safe guide for chronologically equating the Sanur megaliths with those at Brahmagiri or Sulur. Nevertheless, it appears reasonable to infer that the date of the former group was not very far, in either direction, from the chronological limits provided by Brahmagiri and Sulur. As the trend of the expansion of megaliths has been observed to have been northwards from the south or south-west,[4] the megaliths of Chingleput, lying to the south-east of Brahmagiri and north-east of Sulur, should naturally be dated slightly earlier than the Brahmagiri ones and possibly slightly later than the Sulur ones. Beyond this general indication of the date of the Sanur megaliths, it is not possible to be more specific at this stage.[5]

6. THE EXCAVATED MEGALITHS

Five megaliths were excavated at Sanur, two of them (Megaliths 1 and 2) in 1950 and the other three (Megaliths 3, 4 and 5) in 1952. They fell, from their superficial appearance, broadly into three types: cairn-circle, type C (Megaliths 4 and 5); dolmenoid cist,

[1] Wheeler, *op. cit.*, pp. 201-02.

[2] A. Rea in *An. Rep. Arch. Surv. Ind.*, 1908-09 (1912), pp. 92-99.

[3] *Man*, XXX, no. 10, Special India Number (Oct. 1930), p. 172.

[4] B. K. Thapar, 'Maski 1954: a chalcolithic site of the southern Deccan', *Ancient India*, no. 13 (1957), p. 18.

[5] In this context, however, mention may be made of Christoph von Fürer-Haimendorf's view that the Minor Rock-edicts of Aśoka, of which three versions occur at and near Brahmagiri, must reasonably have been addressed to the more advanced iron-using megalithic people than to the more primitive people using the stone axe. Considering the inscriptional reference to the established Dravidian kingdoms in the south, Haimendorf's ascription of megalith-building to the Dravidians would point to a date of at least the third century B.C. for the megaliths at Brahmagiri in preference to Wheeler's dating referred to above. See Banerjee, *op. cit.*, pp. 32-34. For a summary of Haimendorf's view, see *Indo-Asian Culture*, II, no. 3 (Jan. 1954), pp. 238-47.

type D2 (Megalith 3); and dolmenoid cist with flush capstone, type D3 (Megaliths 1 and 2). Excavation, however, showed Megaliths 1, 2 and 3 to be almost of the same type, with Megalith 4 as a variant, though the evidence of the last (Megalith 4), subjected to later spoliation, should be discounted. All of them yielded sarcophagi, ranging in number from one (Megaliths 3 and 4) to five (Megalith 1), and pottery, varying from twentyfive (Megalith 4) to upwards of seventy (Megalith 5). The dolmenoid cists in Megaliths 1, 2 and 3 revealed an opening or gap on the eastern side of the cist-chamber, which apparently corresponded to the port-holes of the Brahmagiri cists and, like them, had subsequently been blocked by irregular bits of stone. Megalith 5, a cairn-circle, which was expected to contain one or more burial-urns, turned out to be a pit-circle like the ones of Brahmagiri, with a profusion of pottery, iron and shell objects and skeletal remains. Megalith 4 contained an incipient cist-chamber without an opening or passage.

All the megaliths were surrounded by stone circles, their overall diameters ranging from 18 ft. to 50 ft.

A. Megaliths 4 and 5 (cairn-circles)

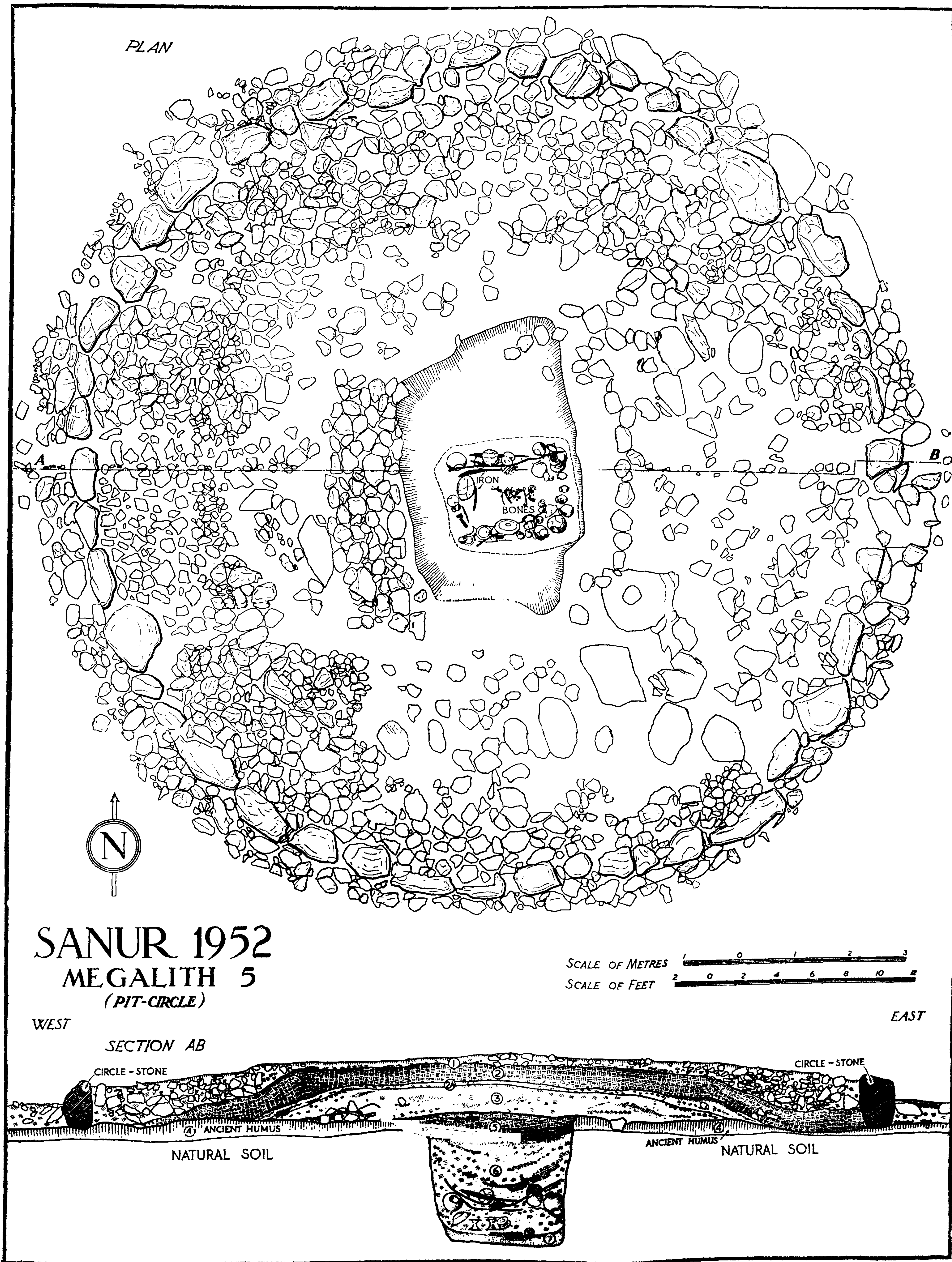
Superficially, the cairn-circle seems to be the simplest form of the megalithic tombs: it consists of a heap of rubble and earth in the shape of roughly hemispherical tumulus, collectively called cairn, bounded at the edge by a circle of stones. An examination of the rifled examples of this type reveals burial-urns, single or multiple, and, occasionally, sarcophagi inside. But, by excavation, they are seen to conceal a more complicated tomb-form.

(i) *Megalith 4* (pls. IV and V)

Megalith 4 was formed by a small circle with an almost imperceptible cairn. The diameter of the circle was 24 ft. 6 in. east-west and 22 ft. north-south. The central interment, a single terracotta sarcophagus with two rows of three legs on each side, was placed, with the major axis of 270°, within the enclosure of a rough and incipient stone chamber, which was nearly at the centre of the circle. The stones forming the chamber, found in a highly-decomposed state, were much smaller in dimensions than the rough unhewn orthostats or dressed slabs of a typical dolmenoid cist. In point of structure, therefore, the megalith seemed to be half-way between a simple cairn-circle, containing that it did a sarcophagus, and a dolmenoid cist, which usually entombs a single sarcophagus or a group thereof inside a cist-chamber built of orthostatic boulders.

The sarcophagus, the fragments of the broken lid of which were found scattered near about, had been placed near the northern orthostat of gneissic granite at the top of the reddish-brown granular soil, which formed the ancient working-level. There were no bones inside the sarcophagus or anywhere else in the tomb. Only three fragments of iron chisels were found, one inside the sarcophagus and the other two outside it on the western side. The sparse complete pots included the complete ring-stand in red ware (similar to type 21, below, p. 24); the rest of the pottery was fragmentary.

The sarcophagus itself, together with the attendant pottery, was found in a battered condition. As no disturbance in the cairn-packing was noticed, it was inferred that the damage had occurred shortly after the sarcophagus and other burial-furniture had been arranged in the tomb and that the remnants were thereafter covered with a packing of mud and rubble. This supposition may perhaps partially account for the absence of bones


PLAN
A
B
IRON
BONES
N
SANUR 1952
MEGALITH 5
(PIT-CIRCLE)
SCALE OF METRES 1 0 1 2 3
SCALE OF FEET 2 0 2 4 6 8 10 12
WEST
EAST
SECTION AB
CIRCLE - STONE
CIRCLE - STONE
ANCIENT HUMUS
ANCIENT HUMUS
NATURAL SOIL
NATURAL SOIL

To face p. 10

in the tomb. A few broken fragments of pottery were observed in the cairn-packing as relics, presumably of the final ritual of entombment (cf. p. 18).

(ii) *Megalith 5* (pls. VI-X)

Megalith 5 was the most remarkable of the excavated megaliths. In appearance, it conformed to a cairn-circle and contained a prominent cairn-heap, nearly 3 ft. 6 in. higher than above the surrounding gound-level, and a large stone circle, 50 ft. in diameter. While it was expected to contain multiple urns, it turned out, after excavation, to be a pit-circle.

The tomb itself consisted of a fairly deep pit, roughly oblong in shape, measuring 17 ft. × 10 ft. at the top and 7 ft. 6 in. deep. It was oriented east-west, with the major axis of 270°. It was cut partly into the red gravelly soil, the top of which formed the contemporary working-level, and partly into the lower rocky soil. The latter being uneven, the bottom of the pit was levelled up by a deposit (layer 7) of earth to a thickness of 9 in., to serve, as it were, as a cushion. The pit did not have a ramp on any side as the Brahmagiri pit-circles nor the non-functional door-slab on the eastern or any other side. The eastern and western edges at its top were bounded by a cluster of closely-packed rubble, placed carefully in just one layer alongside of them; the packing on the western side measured 17 ft. 6 in. × 4 ft. 7 in., and that on the east 15 ft. × 1 ft. 8 in. The northern and southern sides of the pit were left without any packing. It is difficult to surmise the purpose of these linings: it may be conceded that the western reinforcement was used as a platform for stepping upon and in order to prevent the side from wearing out and was also employed for bringing in the burial-objects; but in the case of the eastern line, which was separated from the pit-edge by 1 ft. 11 in. on the south and 2 ft. 7 in. on the north, no such interpretation is possible.

Of the grave-goods, the pottery was huddled along the eastern, southern and northern outer fringes of the pit, to a distance of about 2 ft. towards the centre (leaving the centre itself free), in three levels, to a height ranging from 2 ft. 6 in. to 3 ft. 6 in. from the bottom; the western fringe had only one course of pottery.

A group of skulls and bones (below, p. 41) was found placed in the central space at the very bottom of the pit, though partly pushed to the east. The bones were interred after excarnation and were not articulated. The loose gravelly material, obtained in the course of the scooping out of the pit, was used and possibly allowed to slide down the sides to cover up the interments. Subsequently, as the lower interments had got buried, bones, iron objects and some pottery were placed at different levels as the level of the filling rose. The bones at the next upper level included those of animals, besides human skeletal remains. The occurrence of animal bones, which represented the species of wolf or hyena, the domestic humped cattle of India, the sheep, the goat and the fowl, is bewildering but cannot be dispensed with as merely accidental.

The grave-goods were placed at all levels, without any regular order, having evidently been placed simultaneously with the throwing in of the filling-earth. Throughout, however, the bones, iron objects and pottery were placed along the edges of the pit, while shell objects were thrown into the centre. The deposit-filling, layer 6, in the pit proper was of a uniform kind. In the process of the filling a rather large-sized stone fell into the pit on the northern side down to a depth of 2 ft. and, by its weight, crushed some of the animal bones and disfigured a few iron objects. The pit was then filled up with a secondary filling, layer 5, of dark and clayey earth brought from elsewhere. This was

sealed by a uniform ash-coloured deposit, layer 3, 1 ft. 6 in. thick, containing a generous quantity of specks and nodules of *kankar* with an admixture of land-shells, and was laid immediately over the primary filling of pit, overlying which was a deposit, layer 2A, of clayey earth, 3 to 9 in. in thickness. On top of this was a layer, 2, of compact greyish clayey earth, 1 ft. to 1 ft. 9 in. in thickness, forming the base of the overlying layer, 1, of rubble-topped dark clay. The rubble clustered more thickly round the outer fringe than at the centre, where its distribution was very sparse, suggesting that it had been left bare. As the inner deposits took a roughly hemispherical shape, the lower edge of the circular cairn-packing had a corresponding slope on all sides. The cairn was bounded at the edge by a row of stones forming a circle.

The pit contained upwards of seventy pots of the following types: the pyriform and fusiform jar (types 78 to 80); the black funnel-shaped lid (type 77), comparable with Brahmagiri type P4b[1]; the ring-stand of the ordinary and hour-glass shapes (types 23, and 14 to 17); the Black-and-red tulip-shaped vessel (types 7 to 13); the conical vessel shouldered towards bottom (types 32 to 36); the small bright-red pyriform pot (types 56 to 67) (pp. 22-30); and the Black-and-red ware bowl (types 52-54) and vessel (types 71 and 72). The iron objects consisted of the arrow-head (types 17 to 22), spear (types 1 to 3 and 5), wedge (types 11 to 13), horse-bit (type 26), dagger (similar to types 8 and 9 and type 10), scraper and chisel (below, pp. 35-37).

The pit described above differed in certain essential details from the pit-circles at Brahmagiri. At Sanur, the pit was oblong, the longer axis being oriented east-west. There was no lime-packing, shallow ramp or slab on the eastern side: instead, the top edge of the pit was lined on the eastern and western sides by a revetment of boulders embedded in the ancient humus. Also, the granite slabs at the four corners in the Brahmagiri specimens were absent. The filling inside the Sanur pit had been introduced at one and the same time, and there was no evidence of its re-use. It was, therefore, a real grave rather than 'an inverted tower of silence', as the Brahmagiri ones are supposed to have been.[2] The other alternative suggested for the Brahmagiri pit-circles, viz. 'they may have been specialized tombs for a particular and restricted social grade[3] may have to be explored further in the light of the present evidence.

B. MEGALITH 3 (DOLMENOID CIST) (fig. 1; pls. XI and XII)

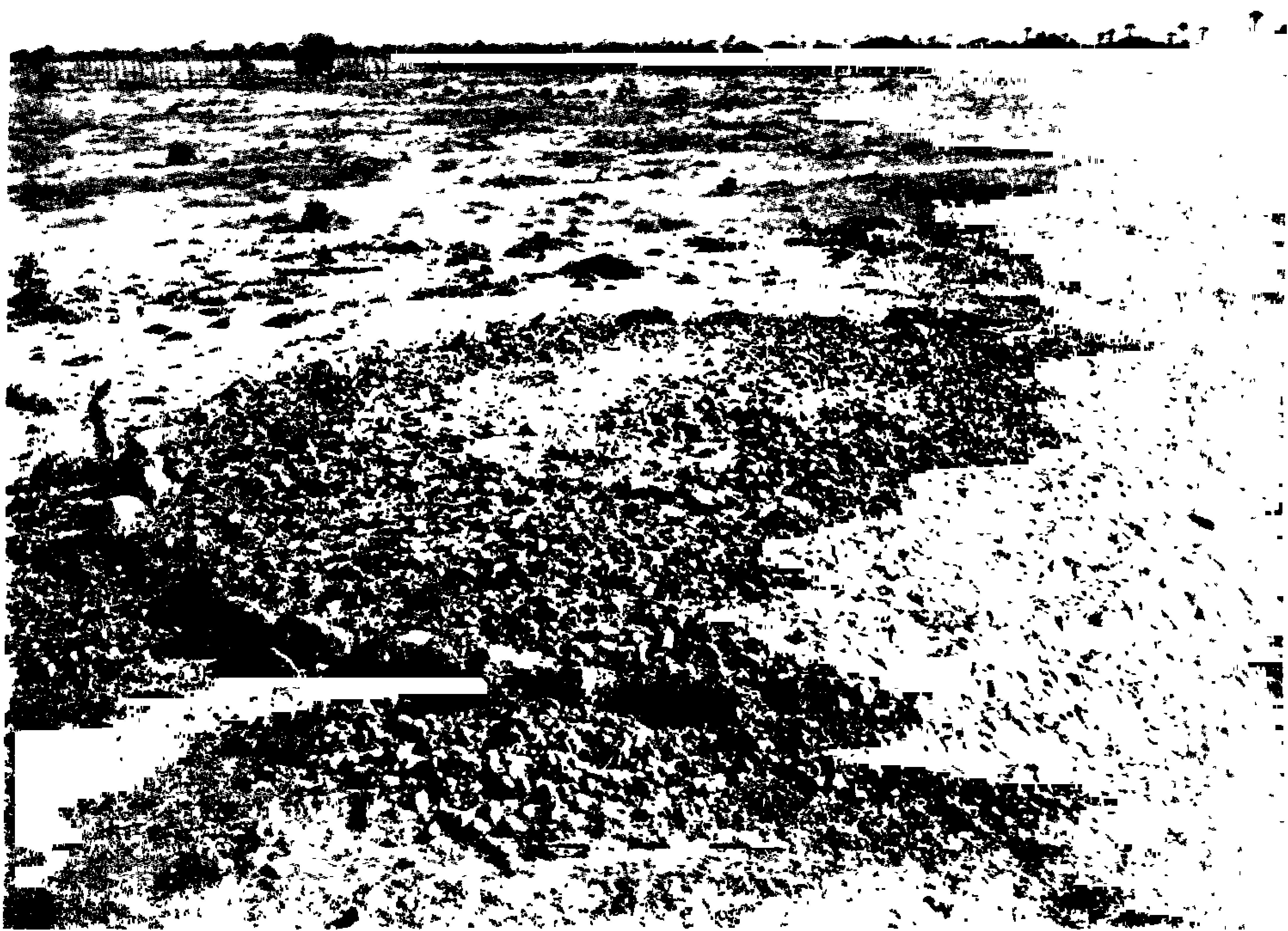
Only one of the excavated megaliths, Megalith 3, belonged to the dolmenoid cist type, D2 (p. 5). Here, a rough stone circle, measuring 18 ft. 6 in. east-west and 18 ft. north-south, enclosed a cist-chamber composed of rough and irregular boulders or orthostats surmounted by a capstone, both the orthostats and the capstone rising above the surrounding ground; the latter was actually higher than the surrounding cairn.

The cist-chamber was made of six orthostatic boulders of different sizes, arranged to form a rough square on plan and enclosed a space measuring 6 ft. × 3 ft. 6 in. × 3 in. The orthostats, varying in size, were planted into the top of red gravelly soil which formed the ancient working-level. The massive capstone, measuring 7 ft. × 5 ft. × 2 ft. 4 in., which was flat below but bore a hump at the top, was intended to rest on the orthostats; actually, however, it was in contact with only three of them, the southern, northern and

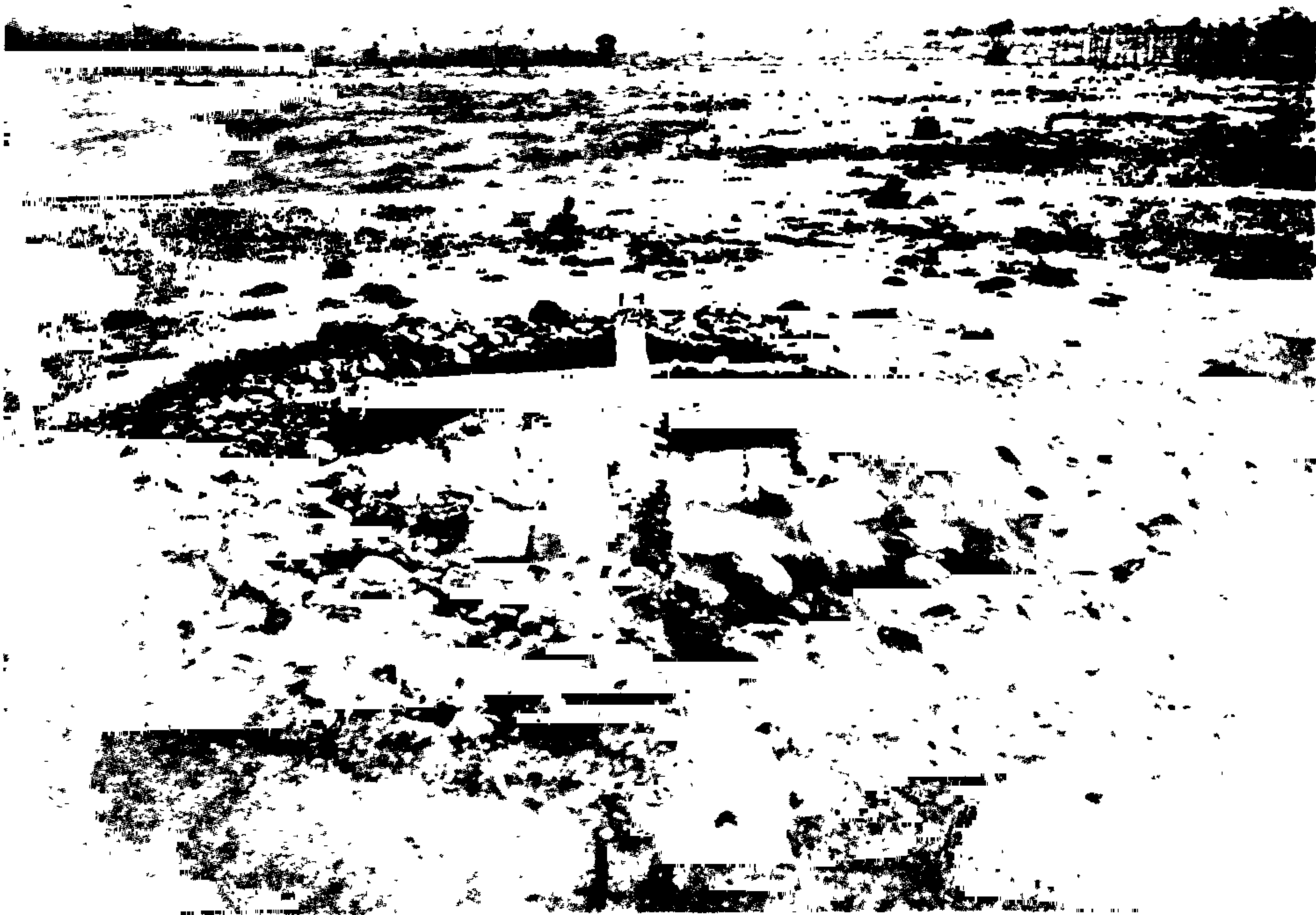
[1] Wheeler, *op. cit.*, p. 217, fig. 13.

[2] *Ibid.*, p. 197. This point, including the Brahmagiri evidence itself, has been examined in detail elsewhere, Banerjee, *op. cit.*, pp. 27-28. The evidence of the pit-burials at Maski points to the same direction, Thapar, *op. cit.*, pp. 26-34.

[3] Wheeler, *op. cit.*, p. 197.



A. *Megalith 5, before excavation.* *See p. 11*



B. *Megalith 5, during excavation.* *See p. 11*

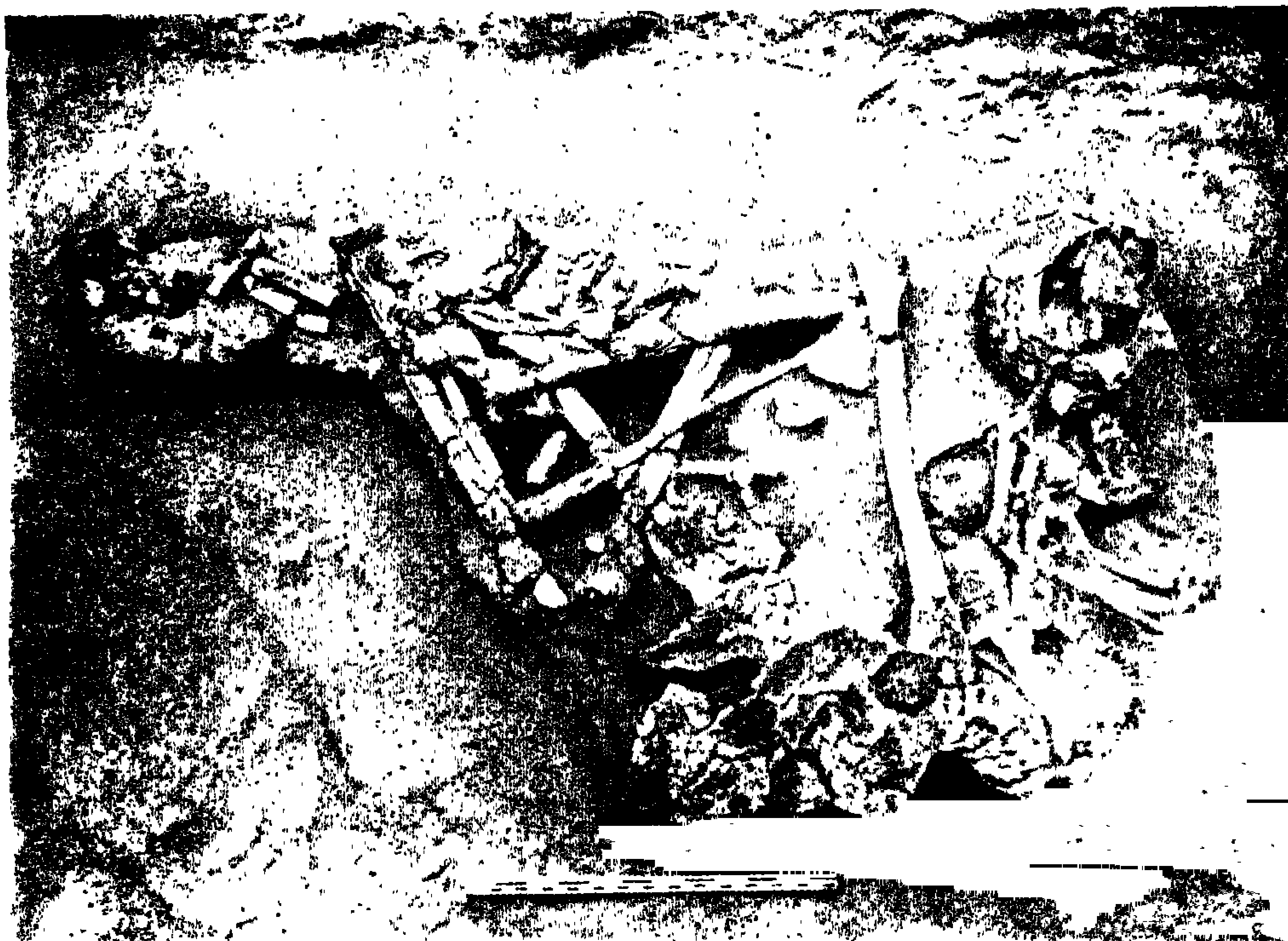
To face p. 12



Megalith 5, pit with deposits. *See p. 11*



Megalith 5, details of deposits. See p. 11



A. *Megalith 5, human skeletal remains.* *See p. 11*



B. *Megalith 5, details of iron objects and animal bones.* *See p. 11*

To face pl. XI

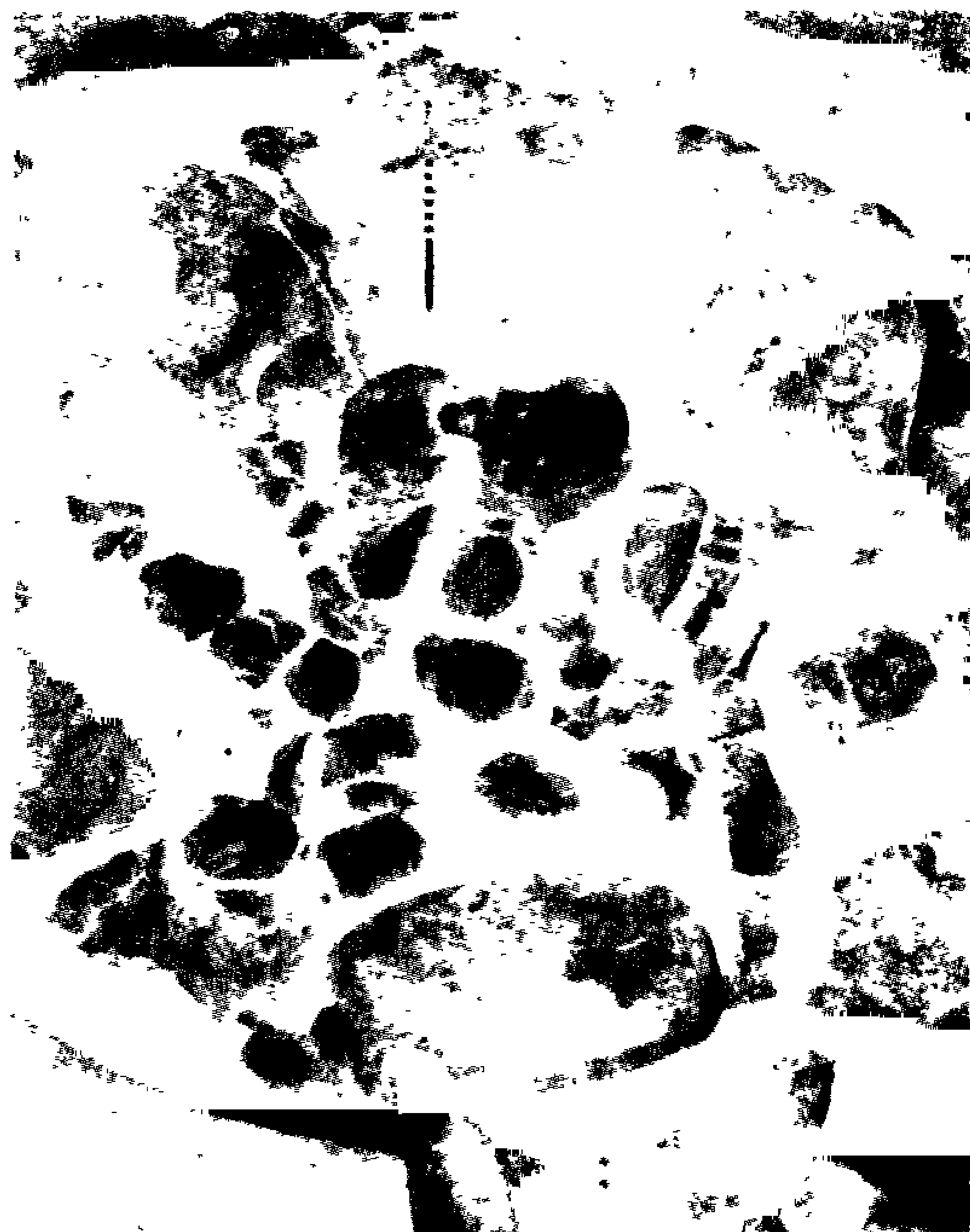


A. *Megalith 3, before excavation. See p. 12*

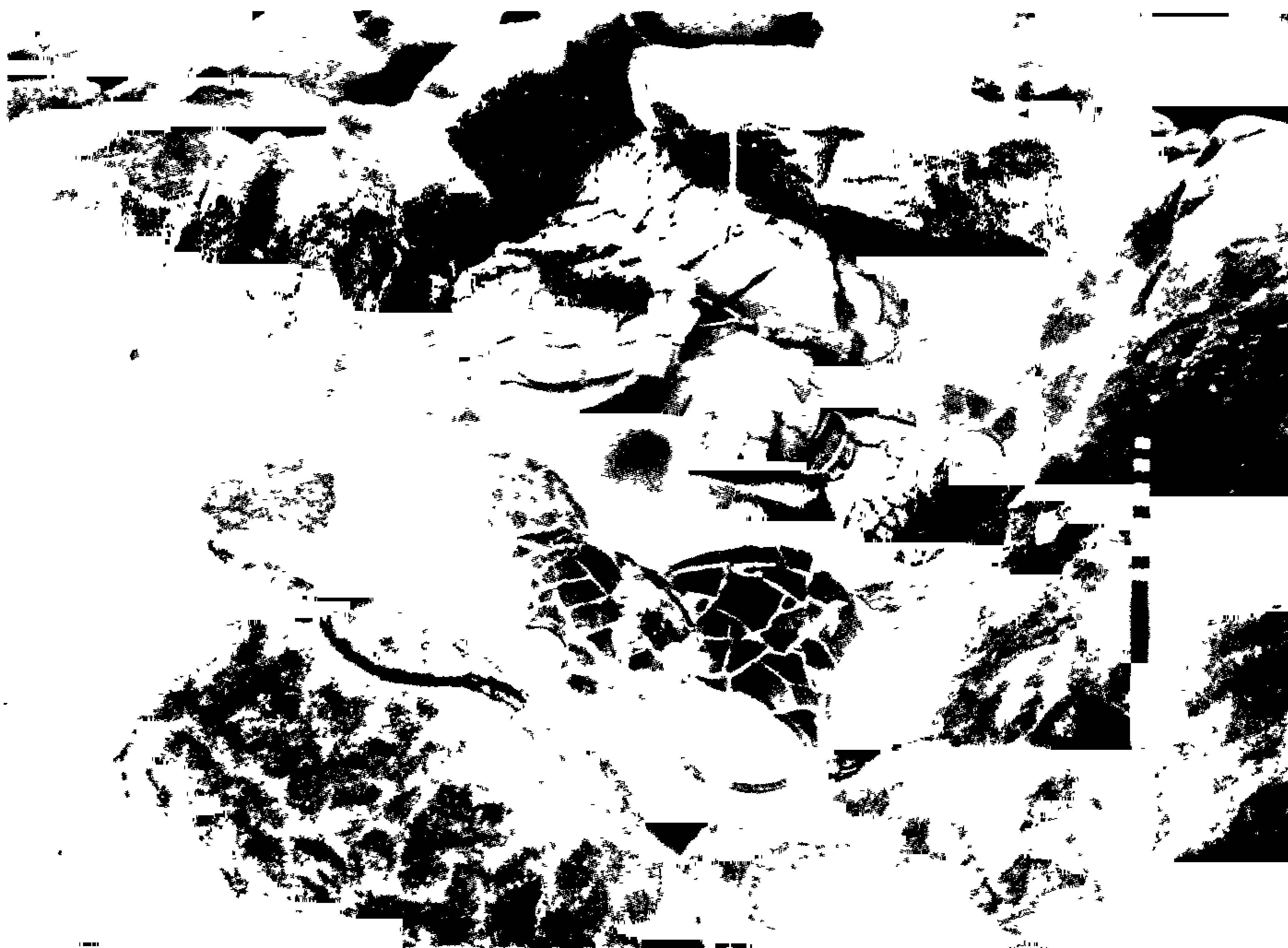


B. *Megalith 3, during excavation. See p. 12*

To face pl. X



A. *Megalith 3, dolmen-chamber with blocked-up eastern passage.* *See p. 12*



B. *Megalith 3, details of deposits in dolmen-chamber.* *See p. 12*

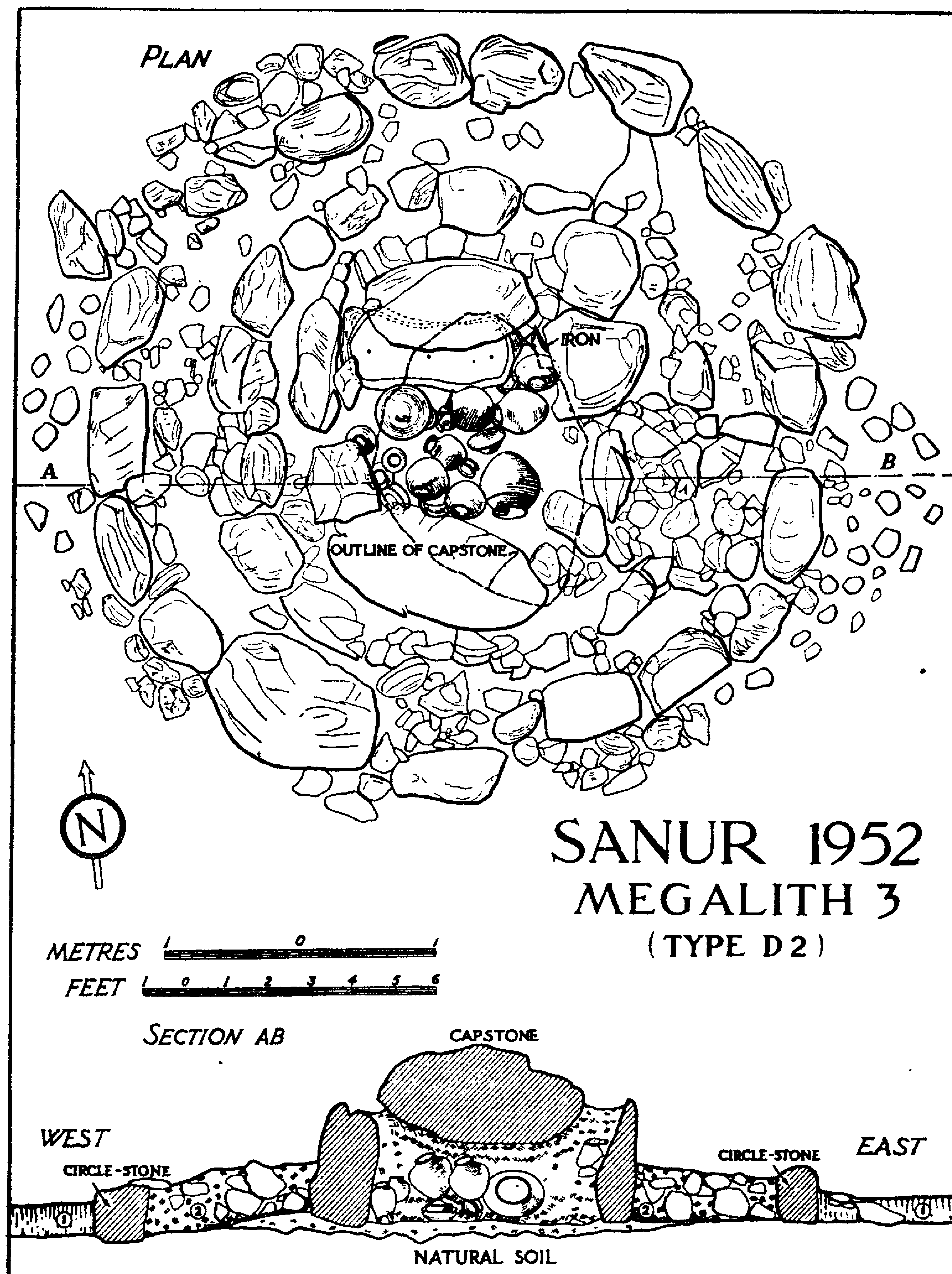

PLAN
IRON
A
B
OUTLINE OF CAPSTONE
N
SANUR 1952
MEGALITH 3
(TYPE D2)
METRES 1 0 1
FEET 1 0 1 2 3 4 5 6
SECTION AB
CAPSTONE
WEST
CIRCLE-STONE
CIRCLE-STONE
EAST
NATURAL SOIL

FIG. 1

south-eastern ones, the rest of its weight falling on the chamber-filling, with disastrous consequences. The other orthostats jutted out beyond the range of the capstone.

The cist-chamber was marked on the eastern side by a passage made of two flanks composed of rubble placed along the edges of a gap deliberately kept between the orthostats. The passage, 2 ft. wide at its narrowest, was subsequently blocked up by a slab, standing in the same alignment as the orthostats themselves but well outside the range of the capstone, submerged under the cairn-heap. It corresponded to the passage or port-hole in the megaliths of Brahmagiri[1] and obviously served the same purpose, viz. the bringing in of the grave-goods; but the capstone could not have been placed in position prior to the completion of the burial-ritual, as the passage was too narrow to allow the entry through it of large-sized sarcophagi of Megaliths 1 and 2 (pp. 15-20). The space between the two flanks was finally filled up with a packing of rubble serving as a buttress to the eastern blocking slab.

An unusual feature of the monument was the occurrence of an inner circle of stones between the outer bounding circle and the chamber. Structurally, this circle kept the orthostats in position and served as a protective girdle for the chamber. The space between it and the chamber was filled up with rubble and clay.

The uneven surface of the original rocky ground was levelled up by a deposit of loose soil, 6 to 9 in. thick, for carrying the funerary objects. Upon this was placed, in the northern half of the chamber, a terracotta sarcophagus, measuring 4 ft. × 2 ft. × 1 ft., oriented east-west and covered by a lid. The sarcophagus, though badly crushed by the weights of the filling above it, the pressing northern orthostat nearest to it and the capstone sitting heavily on the filling, could still be seen to have contained two rows of four legs on each side. There were three evenly-spaced circular holes in its inner bottom and three on its lid, obviously intended for a free circulation of air during firing. The clay, however, was not properly fired, with the result that the material was very fragile.

The sarcophagus contained two carnelian barrel-shaped beads, one of which had etched designs on it (below, p. 40), and a fragmentary iron object. It was bereft of pottery and, strangely enough, even of skeletal remains.

Surrounding the sarcophagus and filling the chamber was a mass of pottery of various shapes and sizes in the Black-and-red Ware and red and polished black wares, counting more than fortyfive. The pots were placed in a jumbled manner and, at some places, at more than one level. The larger pots were found only at the top and the smaller ones at the lower levels. Many of them were completely crushed, owing presumably to the weight of the incumbent capstone; but there were a few complete specimens and a few others only partially damaged. They were of the following types; the Black-and-red bowl (types 37 to 45), vessel (type 70) and dish (similar to types 1 and 2), the black ring-stand (similar to type 21) and lid (type 75); red pyriform jar (type 81), the Black-and-red small round-bottomed pot (types 69 to 70) and a three-legged pot (similar to types 84 and 85) (below, pp. 22-30).

The absence of skeletal remains and the find of only a very limited number of iron objects are intriguing, particularly as there was no noticeable disturbance in the clay-filling to justify the supposition of a susbequent interference resulting in their disappearance. Does the reason lie in the fact that no bones in this case could be salvaged after the excarnation of the corpse elsewhere from the ravages of carrion-eaters, and hence the preparations for the interment, which had already begun, were hurriedly terminated and the grave

[1] Wheeler, *op. cit.*, pp. 187-203. This also corresponded to similar passages in other megaliths found in the course of exploration in Chingleput District.

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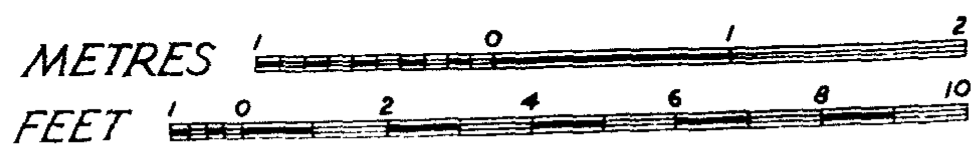
A B

C B D E A IRON

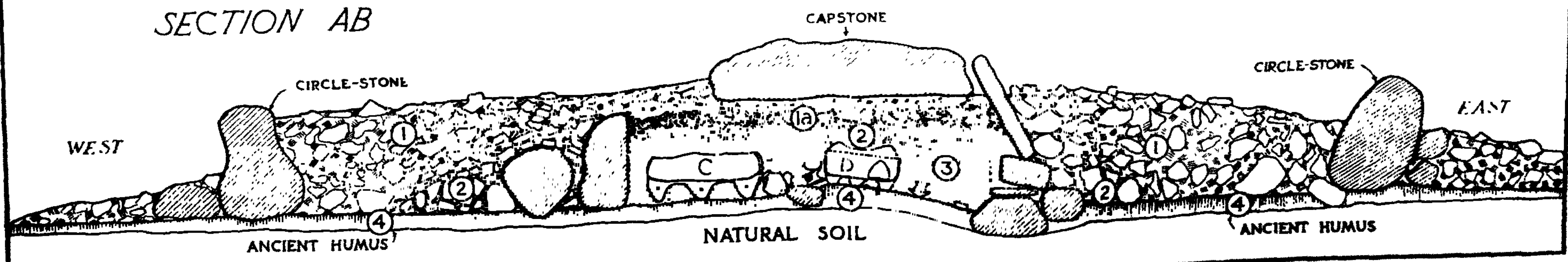
OUTLINE OF CAPSTONE

PLAN

SANUR 1950
MEGALITH I
(TYPE D3)



SECTION AB



sealed in an incomplete state?

From the cramped space within the chamber and the narrowness of the gap as compared with the size of the larger sarcophagi in Megaliths 1 and 2 (pp. 15-20), it is easy to infer that the capstone could not have been placed in position earlier than the introduction of the grave-goods including the sarcophagi.[1] The sequence of the operations must have been as follows: construction of the chamber; its furnishing; filling with clay; covering of the orthostats and the inner circle with rubble and clay-packing to form a hemispherical cairn; and, lastly, carrying of the capstone over a ramp and its hoisting on the orthostats. The capstone itself might have been provided with a covering of rubble and clay to ensure the safety of the tomb—a monument of toil and ingenuity. Indeed, traces of this sealing were to be seen over the inner circle as reaching up to the orthostats, though it had been largely washed away by natural agencies in course of time, thus exposing the capstone and the upper parts of the orthostats.

Though the type of monuments represented by Megalith 3 slightly differed in some details from the following type—the dolmenoid cist with flush capstone—in that a considerable portion of the dolmenoid chamber of the former is exposed and rises above the surrounding ground, while the chamber in the latter is almost completely buried under the rising cairn, only the capstone being exposed as just flush with the cairn-packing, yet the two are otherwise identical in structure and contents[2] and occur promiscuously. Instances of even the capstone being covered by the cairn-heap are also noticed.

C. Megaliths 1 and 2 (dolmenoid cists with flush capstone)

Megaliths 1 and 2 represented the third type of tombs, type D3 (p. 5). They were situated in close proximity to each other.

(i) *Megalith 1* (pls. XIII-XV)

Megalith 1 consisted of a stone circle, 33 ft. in diameter, which enclosed a cairn-heap of rubble and clay rising nearly 4 ft. above the surrounding ground-level and touching the inner surface of a massive granite capstone which just rested on the cairn. The cairn-heap covered, as excavation revealed, a dolmenoid cist made of seven orthostatic granite boulders roughly forming an oblong and outlining a cist-chamber measuring 9 ft. × 5 ft. 6 in., its longer or major axis 299·5°, oriented east-west. The boulders were placed into the natural soil of red gravel, and the interior height of the chamber, up to the bottom of the capstone, was from 2 ft. 6 in. to 3 ft. The capstone measured 6 ft. 9 in. × 6 ft. 9 in. × 1 ft. 7 in. A noticeable feature was the occurrence of an obvious gap, which must have been functional, on the eastern side created by a deliberate juxtaposition of the orthostatic boulders, recalling the corresponding gap in Megalith 3 (p. 14) and the port-holes of Brahmagiri.[3] The gap measured 2 ft. at its

[1] Wheeler suggests the earlier placing of the capstone and the subsequent introduction of the grave-goods through the port-hole at Brahmagiri, *op. cit.*, p. 188. The Sanur evidence was, however, otherwise.

[2] Megalith 3, a monument of type D2, contained, as stated above, only one sarcophagus, though Megaliths 1 and 2, both of type D3, contained multiple sarcophagi. This difference may be due to the smallness of the size of the former, though its being a variant of the main type is not ruled out.

[3] Similar gaps have been noticed by surface-exploration in other megaliths in the neighbourhood, e.g. at Mamandur in Gheyyar Taluk, District North Arcot, and Kunnattur in Madurantakam Taluk, District Chingleput, respectively 35 and 9½ miles from Sanur.

narrowest point and was sealed by a triangular granite slab, 6 in. in thickness, resting on two courses of stone placed at the bottom of the pit. The slab and the orthostats, as also, possibly, the capstone, were further reinforced by a cairn-heap formed by clay and rubble. The slab, inclined inwards and partly resting on the neighbouring eastern orthostat, rose 1 ft. above the other without touching the capstone.

As the circle of stones bounding the dolmenoid cist and cairn was obviously meant to delimit and hold a heavy mass, another ring of stones was placed outside it as a reinforcement to prevent the big boulders of the former from thrusting out.

The chamber contained five legged and lidded terracotta sarcophagi of varied sizes, described below (pp. 17-18) as A to E. All of them, except Sarcophagus E, which was oriented north-south, were laid east-west in the chamber. Sarcophagus D was smaller than the others.

The number of pots in the tomb was more than fifty; they comprised the following types: the Black-and-red dish (types 1 and 2); the Black-and-red conical vessel (type 24); the Black-and-red bowl (types 41-45, 47, 48 and 51); the red water-jar (type 82); the black knobbed lid (similar to type 73) and vessel (type 76); and the red and black ring-stands (types 21 and 22) (below, pp. 22-30).

Besides pottery, iron objects like the spear (similar to types 2 and 3, below, p. 35) and fragments of a couple of human teeth (in Sarcophagus C) and bones were found. The pottery was placed both inside and outside the sarcophagi at various levels like some of the iron objects. The goods were thus laid during the placing of the sarcophagus and in the course of covering up the interments. The sarcophagi themselves were filled with loose earth.

The megalith did not contain any substantial skeletal relics, owing, probably, to the paucity of bones left after the excarnation of the bodies. The fact that a large number of pots was laid inside the sarcophagi in Megalith 1 contrasted with the absence of pottery in the Sarcophagi in Megalith 2, which contained its pottery outside the sarcophagi.

It is inferred that the grave-goods, comprising the sarcophagus, pots and iron objects, were introduced through the adequately wide passage on the east and were suitably arranged inside by one person, or at best two persons, who, after the objects had been placed, came out through the passage. The chamber was then filled up with three layers of earth; the lowest one, 3, 1 ft. 6 in. to 1 ft. 9. in. thick, consisted of loose earth, the next one, 2, 4 ft. 6 in. thick, of clay and the topmost one, 1A, 4 ft. 8 in. thick, of compact clay, nearly touching the bottom of the capstone. Beyond indicating three stages in the filling up of the chamber, the difference in the layers was insignificant. The eastern passage was thereafter sealed by a packing of slabs and blocks of stones. Whether the orthostatic enclosure was reinforced by the deposition of the cairn-heap at this stage, i.e., before the capstone was placed, is difficult to say.

On general grounds, it may be presumed that the capstone was hoisted at its place to cover the chamber after the placing of the grave-goods in the chamber. But to uplift a huge and heavy block of stone the orthostats must have first been covered up with a packing of cairn and the resultant ramp utilized for dragging the capstone to its place (cf. p. 15). It is also reasonable to suppose that the capstone itself was then covered by a mantle of cairn, subsequently removed by natural agencies. No wonder, therefore, that the capstone now remained above the cairn, appearing just flush with it and thus imparting to the monument the distinctive feature which marks it out as a monument of type D3.



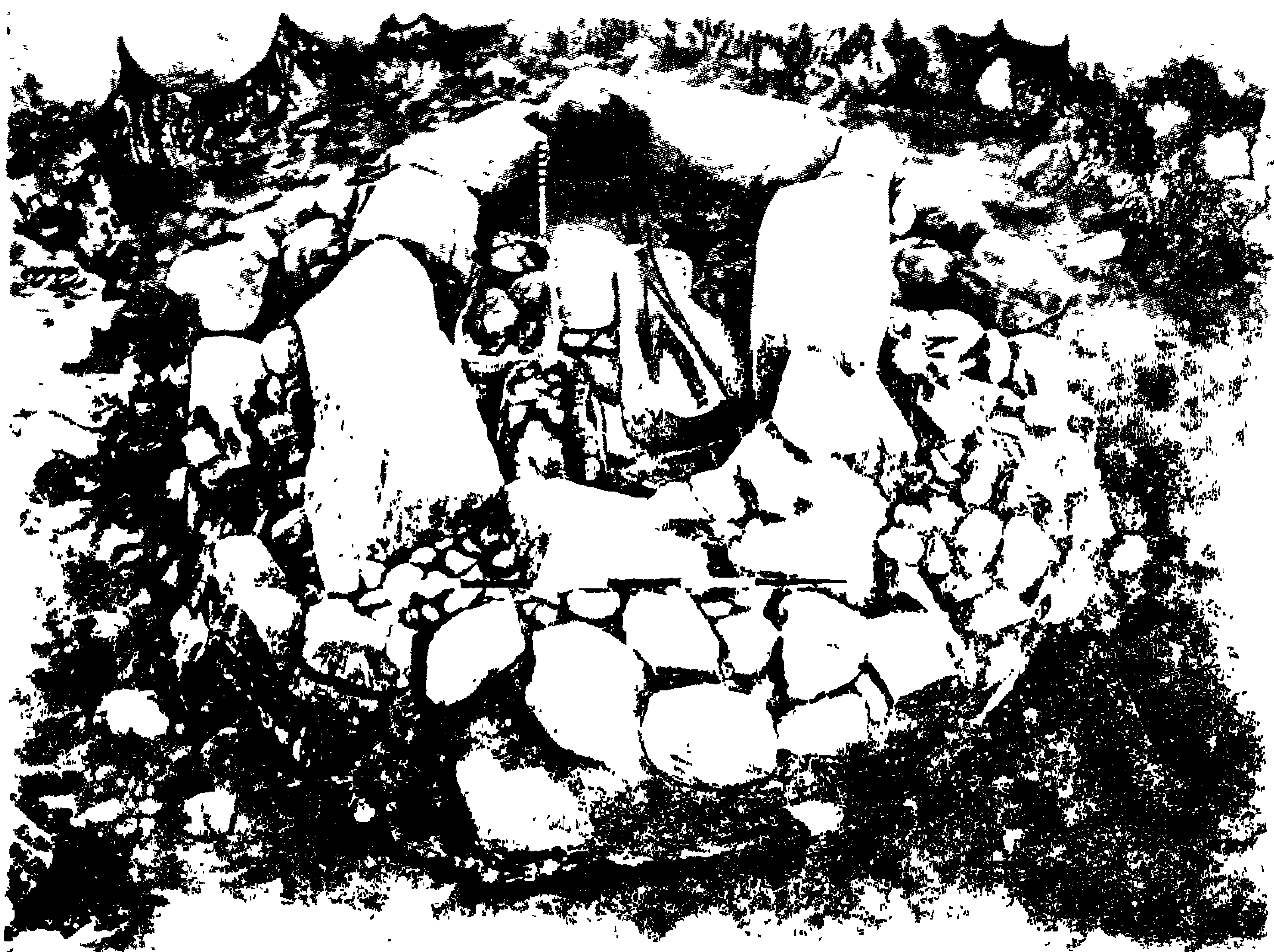
A. *Megaliths 1 and 2, general view before excavation.* *See p. 15*



B. *Megalith 1, before excavation.* *See p. 17*



A. *Megalith 1, during excavation.* *See p. 15*



B. *Megalith 1, deposits in dolmen-chamber.* *See p. 15*

To face pl. XVI



A. *Megalith 2, before excavation. See p. 18*



B. *Megalith 2, during excavation. See p. 18*

To face pl. XV



A. *Megalith 2, sarcophagi and other deposits in dolmen-chamber.* *See p. 18*



B. *Megalith 2, contents of sarcophagi.* *See p. 18*

As stated above (p. 16), five sarcophagi were found in the tomb. Their features and contents may now be described.

SARCOPHAGUS A.—Oriented east-west, it lay along the southern side of the dolmen-chamber. It was 5 ft. long, 1 ft. 9 in. broad and 1 ft. deep and had an elliptical grooved rim and bulging body borne on eighteen short, conical and squat legs. On its eastern and western outer walls were two decorations of a semi-circular or horse-shoe shape and at the four corners were earthen hooks turned upwards, probably intended for holding the lid, which, however, did not exist. Below the level of the hooks were applied, at the corners, clay chains, each about 6 in. long, formed by finger-depressions. It had three evenly-spaced pre-firing holes on the base. Its southern wall had collapsed owing to the weight of the filling above it.

Lying east-west, with their major parts within the sarcophagus, were three long iron spears (similar to types 2 and 3, below, p. 35). There were, besides, two pottery bowls (type 43, below, p. 27), one within the other, lying on their sides on or slightly above the bottom of the sarcophagus near its eastern end. The sarcophagus otherwise contained only a loose filling of clayey earth.

SARCOPHAGUS B.—This was a roughly oblong coffin of a slightly better fabric than that of Sarcophagus A. It measured 4 ft. in length, 1 ft. 9 in. in width and 1 ft. in depth and lay with its northern wall close to the north-eastern line of orthostats. Its north-east end butted against the inner side of the orthostat just next on the north of the slab blocking the gap. Like Sarcophagus A, it had no lid but had three holes at the bottom and the applied chain at the corners. The utter crudeness with which the sarcophagi had been laid upon the undulating rocky soil was particularly manifest in the present case, where the sarcophagus had been placed partly on a small boulder outcrop and got so crushed by the weight of the filling that one of its legs was pushed up into one of the pots inside.

From underneath the sarcophagus was recovered a socketed iron arrow-head (similar to type 19, p. 37), and outside it two other objects, partly jutting out below it, besides a hook (similar to types 15 and 16, p. 37), lying north-south partially on a pottery dish (similar to type 1, p. 22) and an unusually thin tanged dagger or knife (type 9, below, p. 35), leaning upon the small north-eastern orthostat and consequently broken into two at the middle point. Further west, and partly under the sarcophagus, was a small deep pottery bowl (similar to type 41, p. 24). The sarcophagus itself was veritably huddled with pottery of many types, which broke under the overlying weight and the broken fragments of which were spread in a disorderly fashion inside it, the moist clay-filling inside also having done its part of the destruction.

SARCOPHAGUS C.—This was one of the worst-affected sarcophagi and was found totally crushed owing to its poor fabric and firing. It was lying along the northern orthostat roughly in alignment with and slightly to the south of Sarcophagus B and was oriented east-west. It measured roughly 4 ft. × 1 ft. 6 in. × 1 ft. and had a bulging body and a thick rim with a very shallow groove. Originally it had a lid, which, however, shifted laterally towards the south and collapsed all round the sarcophagus. It stood on three rows of four legs each and, like Sarcophagi A and B, had an ornamented chain at its four outer corners but had only two holes at the bottom. Its north-western end had jammed against the northern orthostat. The coffin was apparently important for it had a lid, but actually it contained only a few small fragments of bones and two broken teeth at its bottom, the other objects in it being a pot similar to type 79 (below, p. 30) at its western end, placed sideways, and an iron dagger similar to type 9 (below, p. 35).

SARCOPHAGUS D.—With a position between Sarcophagi A and B, it was a small oblong coffin, 2 ft. × 1 ft. 1 in. × 9 in., with a flat grooveless rim, upon which rested a hollow elliptical lid with a slightly-rolled crushed rim. About 2 in. below the rim ran all around an applied band of twisted-cord ornamentations, 1¼ in. in width. It had two holes each at the bottom and on the outer and inner sides of the legs at middle height. It was supported upon six legs in two rows of three each; the legs were hollow and cylindrical, slightly spread out at the bottom. The orientation was east-west, like those of Sarcophagi A and B. Inside was found nothing but a conical pottery vase, placed in an inverted position at its eastern end and filled with earth.

SARCOPHAGUS E.—This was in a sense the problem-coffin of the tomb, as it did not contain anything, not even a pot. In fact, it was too shallow for it, being barely 4 in. deep. It was of an oblong shape, 1 ft. 10 in. × 1 ft., with a weakly-grooved rim, 1 in. wide, and was borne by four hollow legs but had no lid. It was orientated slightly north-east to south-west, the usual east-west orientation being sacrificed owing to the exigencies of the space available at the south-west end of the tomb. It was the most ill-baked sarcophagus in the tomb and when exposed crumbled almost at the slightest touch.

(ii) *Megalith 2* (pls. XVI-XVIII)

Though similar in features to Megalith 1, to the north of which it was situated, the facts recorded in this monument were more interesting and important. The circle was 45 ft. in diameter, and its stones were reinforced by a buttress of rubble and clay placed tightly against their outer surface, forming a second protective girdle of clay. The circle and the cairn-heap respectively touched and overlapped those of Megalith 1, thus clearly indicating that Megalith 2 was structurally the later one, though the chronological gap between the two could not have been significantly wide.

The cist-chamber was of the shape of a pentagon, made of seven orthostatic boulders, enclosing roughly a space measuring 6 ft. 6 in. × 7 ft. 6 in. The orthostats, planted just into the top of the ancient ground-level, seem to have supported a massive capstone, which was subsequently broken and quarried away. The depth of the chamber from the inner surface of the capstone to the bottom should have been about 4 ft. Its major axis, oriented east-west, was 275°. The chamber had the usual gap on the eastern side, 2 ft. 7 in. wide at its narrowest point, blocked by two slabs, one placed frontally and the other sideways, both resting on two courses of flat blocks of stones placed at the bottom, their height rising, in consequence, above the eastern orthostats by nearly 1 ft. The blocking was strengthened by the huddling together of a number of stones against the slabs, which, in turn, was secured by the packing of mud forming part of the sealing cairn-heap. The filling at the lower levels of the tomb was loose earth, which tended to harden towards the top. The cairn-filling also contained fragments of crushed or broken pots, probably the relics of the final rituals connected with the entombment, reminiscent of a practice of breaking pots before the abandonment of the place. The same feature was observed in Megalith 4 (p. 11).

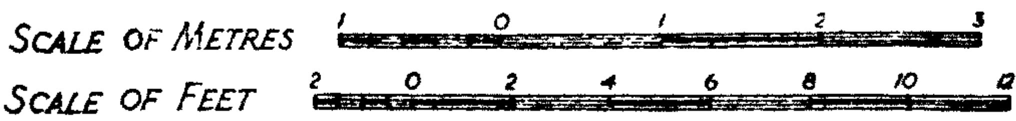
The grave-goods placed inside the chamber consisted of three sarcophagi, of which two were arranged east-west and the third, owing to the exigencies of space, north-east to south-west. The pottery inside the dolmen-chamber, numbering over twentyfive, included the Black-and-red dish (similar to types 1 and 2), the Black-and-red bowl (similar to types 43 and 45), the ring-stand in black and dull-red wares, both of the hour-glass type and ordinary shapes (types 18-20 and similar to 23), the dull-red pyriform

SANUR 1950
MEGALITH 2
(TYPE D3)

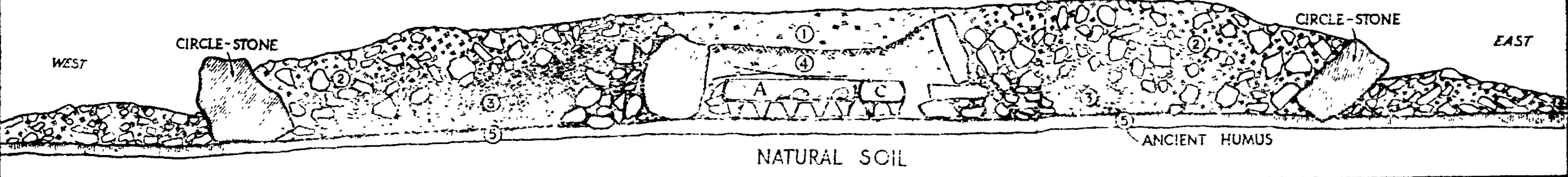
PLAN

A B

BONES A B C IRON



SECTION AB



To face p. 18

jar (type 83) and the dull-red three-legged pot (type 84) (below, pp. 22-30). The iron objects found inside were the bar (types 4 and 6), the tanged knife or dagger (type 8), the hook (types 15 and 16), the spear- or arrow-head (type 23), the sickle (type 25), the arrow-head (similar to types 18 and 20), the horse-bit (a variant of type 26) and the spear (similar to type 3) (below, pp. 35-37). Besides these, a round ball of vein-quartz (p. 39) and a fairly good quantity of skeletal remains consisting of disarticulated bones and two skulls, were found inside. The bones were located inside two of the sarcophagi, in some of the three-legged pots and even in the open, just outside the sarcophagi.

The presence of two skulls in the tomb (p. 41) indicates the burial therein of the remains of more than one person. The fact that the skulls lay together and the absence of any disturbance in the filling and the cairn also point to their simultaneous burial.

None of the sarcophagi contained any pot: in this important detail this megalith differed from Megalith 1. The loose condition of the interred pots was sometimes responsible for their breakage and displacement.

As already stated (p. 18), the megalith contained three sarcophagi, which are described below.

SARCOPHAGUS A.—This sarcophagus, with an east-west orientation, was the largest in the megalith, measuring 5 ft. long, 2 ft. 6 in. broad and 1 ft. deep. It had a thickly-grooved rim and a lid crushed *in situ*. A chain-decoration executed by finger-depressions ran all round the body, about 4 in. below the rim. At the four corners also were similar, but vertical, decorations running to a length of 6¾ in., their upper portions ending in hooks. A horse-shoe chain-decoration occurred on the smaller sides as well below the running chain. The sarcophagus was borne on fifteen short squat legs in three rows of five each. It had three holes at the bottom. The sarcophagus was covered by a lid intended to fit into the groove on its edge. The lid too bore chain-decorations in the form of short horizontal lines at the edges of the longer sides and in a horse-shoe form in the middle of each of the smaller sides. The lid had five holes, of which one was in the centre and two each along the smaller sides.

Inside the sarcophagus was found huddled a cluster of disarticulated long bones, ribs and two crania, all concentrated on the eastern side (p. 41). The inside filling mostly consisted of *kankar* pellets, generally loose but clayey and hard at places. The filling thus differed from that of the chamber and also from that of the other sarcophagi.

SARCOPHAGUS B.—This was an elongated ovoid coffin, oriented east-west, with a bulging body and well-grooved rim originally closed by a convex lid, which, in its mutilated state, half covered the sarcophagus, its other fragments lying partly inside and partly outside on the south. It had eighteen legs in three rows of six each and had the usual horse-shoe applied ornamentation at its western and eastern ends.

It is curious that while teeth and tiny bone-pieces were found in the chamber-filling, no bone was found in the sarcophagus itself. To the north of the sarcophagus and close along its body were placed two long iron spears (similar to type 3, below, p. 35), each more than 5 ft. long, one above the other, with their tips towards the east. Two other iron objects, viz. a hook, 2 ft. long, with a handle of oblong cross-section and a curved blade-edge (type 16, below, p. 37), and a small tanged knife (similar to type 8, below, p. 35), were found; the former lay at about the level of the bottom of the sarcophagus and the latter just under it between two of its legs, its tip slightly peeping out on the northern side.

SARCOPHAGUS C.—This was an oblong coffin, 3 ft. 6 in. × 1 ft. 9 in. × 9 in., with grooved rim and fifteen hollow legs in three rows of five each. It had two holes at the bottom

and holes on the inner sides of the legs. It had no lid but had the horse-shoe ornamentation at the four corners of its outer walls. It was oriented roughly nor.h-east to south-west and was nearest to the eastern opening. Its position showed that it had been the last sarcophagus to be laid after the other two had been accommodated; and possibly owing to the exigencies of space its orientation departed from the norm. At the bottom of its loose *kankar*-specked filling were found a broken long bone, probably a femur, lying north-south, at the centre, and broken parts of thinner bones lying towards the southern end of the sarcophagus and resting upon a thin tanged dagger lying east-west. Pieces of bone were found all over at the bottom level.

7. THE POTTERY

A. The types and their distribution

Besides the usual Black-and-red Ware with a polished surface—the most common ware in south Indian megaliths—the Sanur tombs yielded a burnished black ware (entirely distinct from the Northern Black Polished Ware), a dull terracotta-red ware with drab wash and slip and a ware with bright-red slip. The pottery was invariably wheel-turned, well-baked and polished. The material used in making the pots exhibited a sparing use of sand as dégraissant. The ceramics bore no decoration or painting.

While the pottery from Megalith 1 was disintegrated partly by the weathering action of water percolating into it, that from the other tombs was well-fired and exhibited varied types, the chief of which were: the bowl, the conical vessel; the dish; the tulip-shaped vase; the three-legged pot; the round-bottomed pot; the pyriform jar and pot; the ring-stand; and the conical and knobbed lid. The distribution of the pottery-types (figs. 2-7) among the megaliths was as follows.

Megalith 1.—The pots were placed both inside and outside the sarcophagi, some above the sarcophagi and at the sides, but none below them. The types mainly comprised the dish in the Black-and-red Ware (types 1 and 2), the conical vessel in the same Ware (type 24), the ring-stand in black ware (type 21), the large water-jar in red ware (type 82) and the three-legged pot with applied hand-made legs in red ware (type 85).

Megalith 2.—The pots in this Megalith, all found outside the sarcophagi, mainly consisted of the Black-and-red Ware dish (similar to types 1 and 2), the tulip-shaped carinated vessel (types 5 and 6), the bowl (similar to type 43 and 44), the conical vessel (types 25 to 31), the ring-stand in black and red wares of the ordinary and hour-glass shapes (types 18 to 20), the large pyriform jar of red ware (type 83) and the three-legged pot (type 84).

Megalith 3.—The pottery was found distributed over the sarcophagus and at its sides, but none beneath or inside it. The types included the small and large bowls in the Black-and-red Ware (types 37 to 40, 45, and 50), the jar with a flat base in the same Ware (types 68 and 69), the large pyriform jar in red ware (type 81) and the funnel-shaped lid in black ware (types 73 and 74).

Megalith 4.—The pottery in this tomb, mostly fragmentary, was scattered all round the sarcophagus, there being none inside or beneath it. The types included the dish in the Black-and-red Ware (similar to types 1 and 2), the ring-stand in red ware (similar to type 21), the shallow and deep bowl in the Black-and-red Ware (type 49) and the globular jar, rim and neck missing, in red ware.

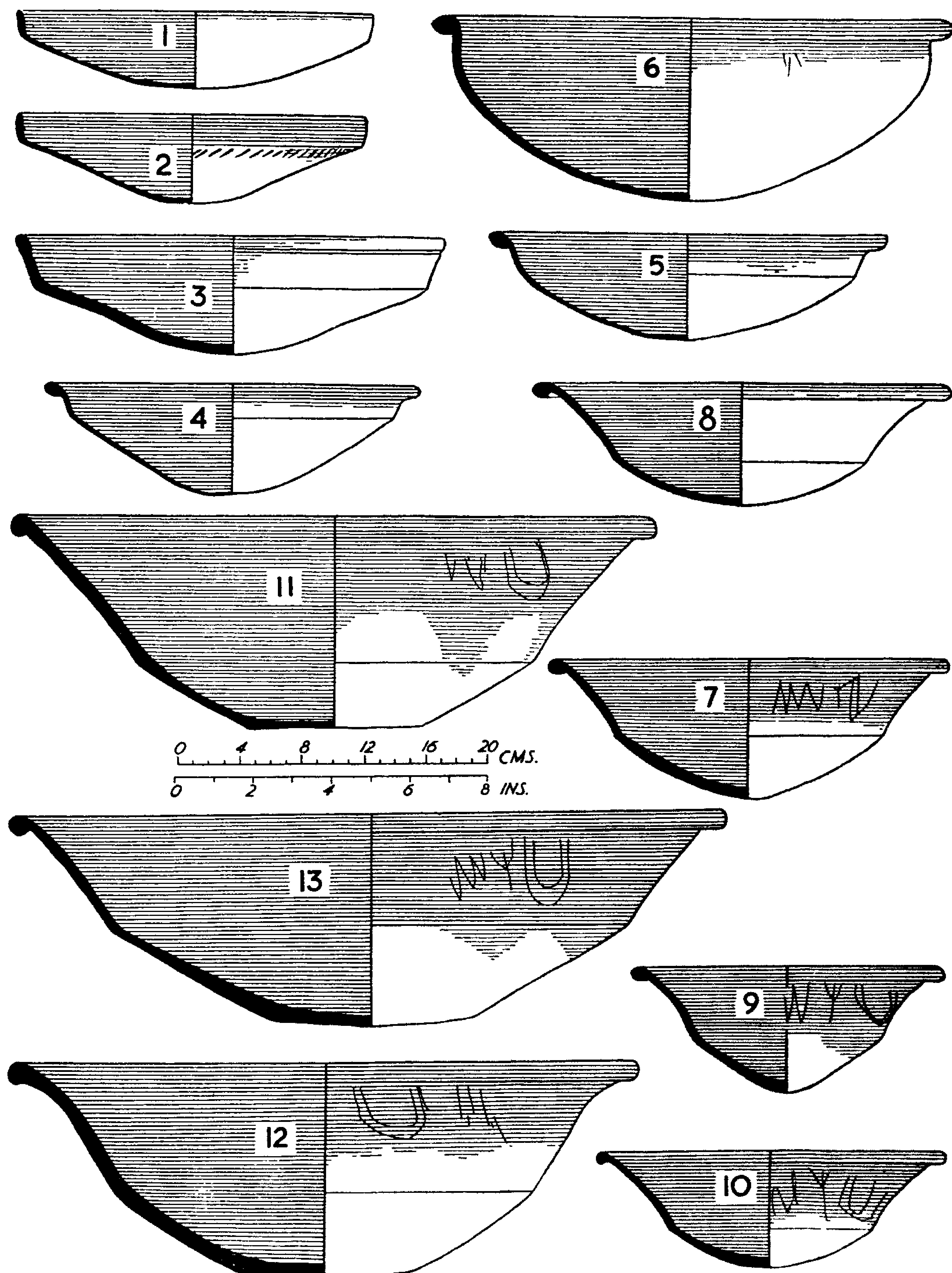


FIG. 2. *Pottery-types 1 to 13*

MEGALITH 5.—The pottery was found huddled along the outer fringes, with a concentration on the eastern, southern and northern periphery of the pit, leaving the central portion free for the placing of bones. It consisted mainly of the pyriform and fusiform jars (types 78 to 80), the Black-and-red tulip-shaped vessel (types 7 to 13), the conical vessel shouldered towards the bottom (types 32 to 36), the funnel-shaped lid in black ware (type 77), the ring-stand of the ordinary and hour-glass shapes, both in black and in red wares (types 14 to 17 and 23) and the small bright-red pyriform pot (types 56 to 67).

The following types bore post-firing graffiti, which are dealt with separately (pp. 30-34): types 6, 7, 9, 11 to 14, 16 to 22, 24 to 26, 30 to 43, 45, 47, 48, 51 to 53, 56 to 68, 70 to 72, 74, 76 and 78 to 80.

Figs. 2-7

Type 1. Dish in the Black-and-red Ware with a straight and sharpened rim and a sagger base. (Megalith 1.)

Type 2. Variant of type 1, with a pronounced sagger base. (Megalith 1.)

Type 3. Dish in the Black-and-red Ware with a collared rim, slanting sides and a sagger base. (Megalith 4.)

Type 4. Tulip-shaped vessel in the Black-and-red Ware, with an externally-beaded rim, straight sides and a sagger base. A small depression exists below the rim. (Megalith 1.)

Type 5. Tulip-shaped carinated vessel in the Black-and-red Ware, with an externally-beaded rim and a sagger base. (Megalith 2.)

Type 6. Large tulip-shaped vessel with an everted rim, straight sides and a globular body. (Megalith 2.)

Type 7. Tulip-shaped vase or basin in the Black-and-red Ware, carinated at the body and having a thick flared and externally-beaded rim with two grooves immediately below it and a convex base. Internally there is a pronounced depression corresponding to the carination outside. (Megalith 5.)

Type 8. Similar to type 7, but bluntly carinated and having a thick beaded rim with multiple faint grooves below it and an almost flat base. (Megalith 5.)

Type 9. Tulip-shaped vase or basin in the Black-and-red Ware, with a beaded rim, a bluntly-carinated body and a rounded base. (Megalith 5.)

Type 10. Small tulip-shaped vase or basin in the Black-and-red Ware, with a beaded rim, a bluntly-carinated body and a rounded base. Two grooves run immediately above the line of carination. (Megalith 5.)

Type 11. Large tulip-shaped vase or basin in the Black-and-red Ware, with a beaded rim, a carinated waist and a flattened base. A single groove is present below the rim. (Megalith 5.)

Type 12. Similar to type 11, but the carination is blunt. It has multiple faint grooves below the rim. (Megalith 5.)

Type 13. Similar to type 11, but without grooves. (Megalith 5.)

Type 14. Ring-stand of the hour-glass shape in dark-red ware with a slip, having a beaded upper rim and a flat rolled lower rim, above which is a raised irregular line. (Megalith 5.)

Type 15. Similar to type 14, but with a beaded rim at each end. There is a raised line above one of the rims. (Megalith 5.)

Type 16. Similar to type 15, but with graffiti. (Megalith 5.)

Type 17. Similar to type 15, but the rims are flat and rolled. Two grooves run along the flat portion near each rim. (Megalith 5.)

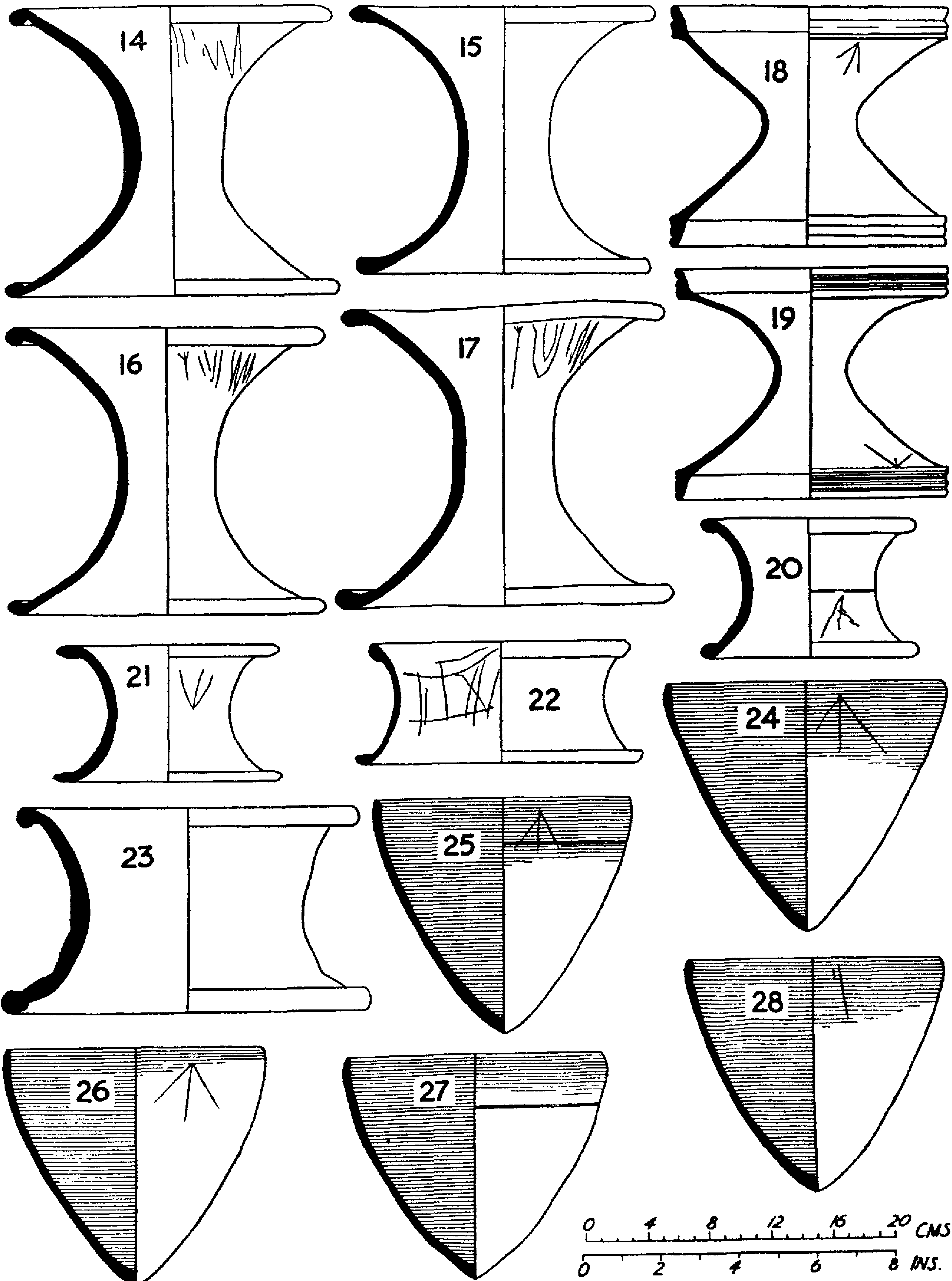


FIG. 3. *Pottery-types 14 to 28*

Type 18. Ring-stand of the hour-glass shape, in polished black ware, with thick everted and broad rims. Two deep depressions and a prominent mid-rib form the rims. Below the upper rim and over the lower one are deep continuous grooves. (Megalith 2.)

Type 19. Similar to type 18. The lower broad rim is made up of several thickened grooves. (Megalith 2.)

Type 20. Ring-stand in black ware, with thick lines at the waist. (Megalith 2.)

Type 21. Similar to type 20. Two faint discontinuous grooves are visible towards the broader bottom-portion. The lower rim is more slender than the upper, which is thick and flaring. (Megalith 1).

Type 22. Ring-stand in black ware, with beaded rims. It is unique in having the post-firing graffiti on the inner side instead of on the outer. (Megalith 1.)

Type 23. Ring-stand in dull red-ware, with a beaded upper rim and a rolled rim with a flattened bottom on the larger lower side. The lower rim has a shallow depression on the inner side. It has a red wash and is crudely made. (Megalith 5.)

Type 24. Conical vessel in the Black-and-red Ware, with a slightly inturned side and a sharpened rim. A discontinuous groove is visible 1½ in. below the mouth. (Megalith 1.)

Type 25. Similar to type 24, but with a continuous groove. (Megalith 2.)

Type 26. Similar to type 24, but with a slight bulge from the waist to the mouth. (Megalith 2.)

Type 27. Similar to 24 but without graffiti. (Megalith 2.)

Type 28. Similar to 24, but with different graffiti. (Megalith 2.)

Type 29. Similar to 24, but without groove and graffiti. (Megalith 2.)

Type 30. Large conical vessel in the Black-and-red Ware, with a flaring mouth, straight sides and a sharpened rim. A discontinuous groove is noticeable just below the edge. (Megalith 2.)

Type 31. Large conical vessel in the Black-and-red Ware, with a flaring mouth, an everted rim and a carinated shoulder. At the point of carination there are seven holes distributed at intervals along the periphery. The holes might have been for the insertion of strings, so that the vessel, which in all probability served as a lid, could be handled with ease. (Megalith 2.)

Type 32. Conical vessel in the Black-and-red Ware, with a flaring mouth, a beaded rim and a prominent ledge towards the bottom. Internally there is a depression corresponding to the ledge outside. (Megalith 5.)

Type 33. Similar to type 32, but smaller in size. There is an accidental and incomplete groove above the ledge. It does not have the internal depression of the previous type. (Megalith 5.)

Type 34. Similar to type 32, but has a deep channel-like depression below the rim. As in type 33, the internal depression is absent. (Megalith 5.)

Type 35. Conical vessel in the Black-and-red Ware, with an everted rim and a ledge towards the bottom. A groove runs immediately below the rim and three round the body. It has an internal depression corresponding to the ledge. (Megalith 5.)

Type 36. Similar to type 35. A groove runs below the rim and discontinuous grooves run round the body above the ledge. There is no internal depression. (Megalith 5.)

Type 37. Bowl in the Black-and-red Ware, with a thin and straight rim and a rounded base. (Megalith 3.)

Type 38. Small bowl in the Black-and-red Ware, with a straight featureless rim and flattened base. A single groove runs along the waist. (Megalith 3.)

Type 39. Bowl in the Black-and-red Ware, with a thin and sharpened rim and several faint grooves above a slightly-bulging waist. The base is slightly convex. (Megalith 3.)

Type 40. Bowl in the Black-and-red Ware, with a straight rim and a rounded base. A single raised line is present slightly above the waist. (Megalith 3.)

Type 41. Similar to type 39, but with straight sides and a base. (Megalith 1.)

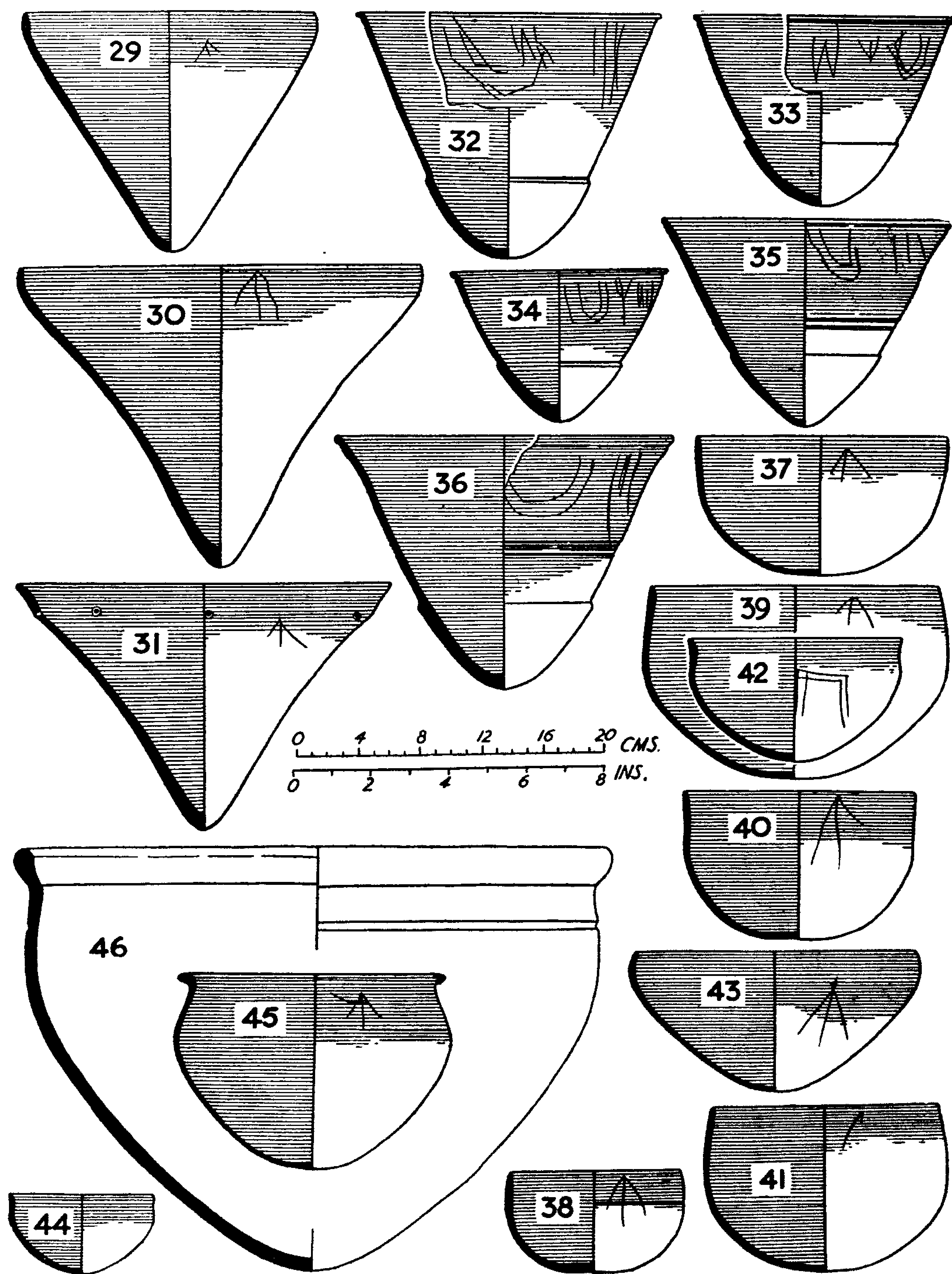


FIG. 4. *Pottery-types 29 to 46*

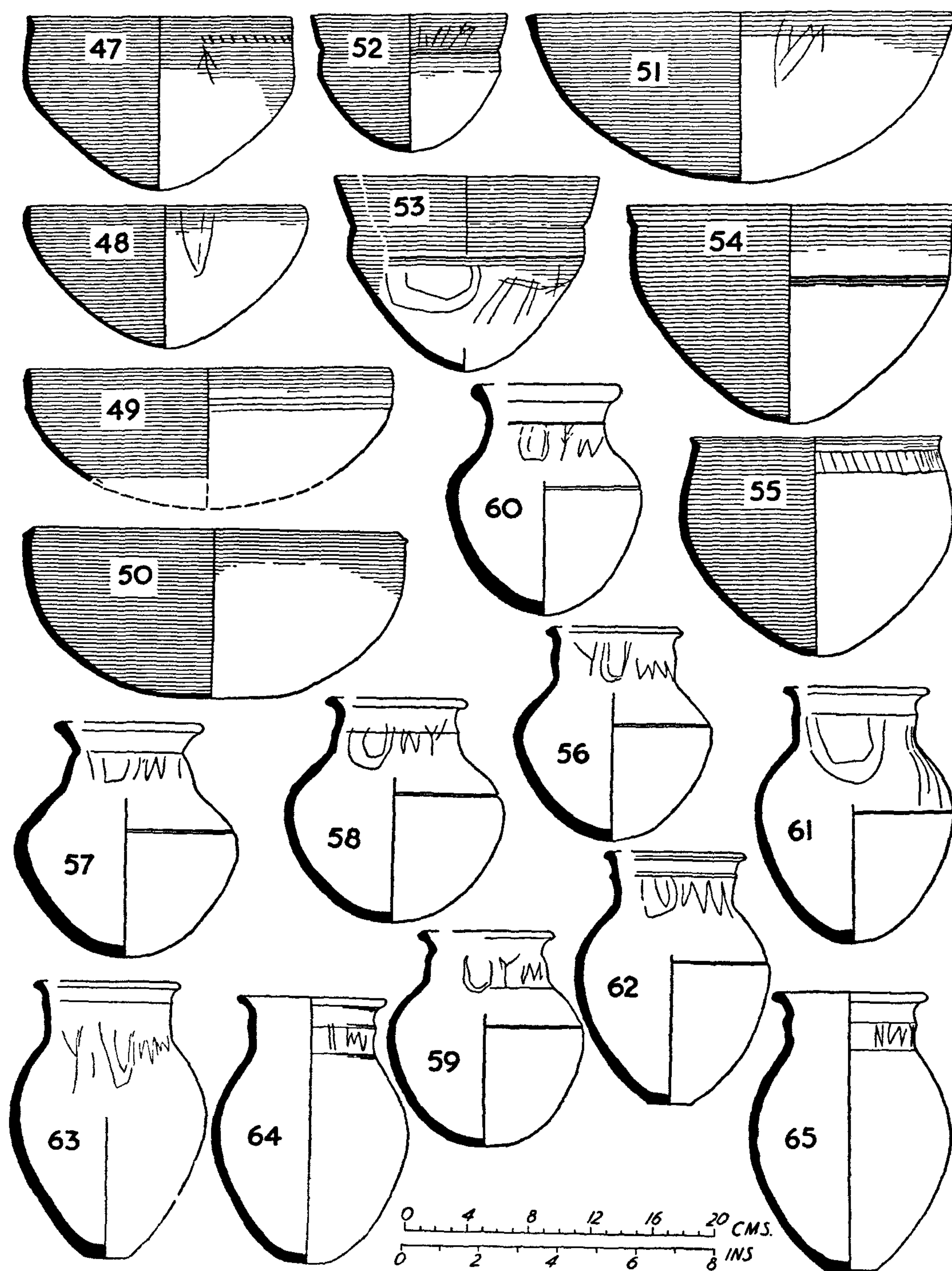


FIG. 5. *Pottery-types 47 to 65*

Type 42. Bowl in the Black-and-red Ware, with an externally-everted rim and a rounded base. A slight external depression is noticeable on the neck. (Megalith 1.)

Type 43. Bowl in the Black-and-red Ware, with a slightly inturned and sharpened rim, a tapering body and a conical base. It is a common type. (Megalith 1.)

Type 44. Small bowl in the Black-and-red Ware, with an everted rim, tall sides and a rounded base. (Megalith 1.)

Type 45. Deep globular bowl in the Black-and-red Ware, with an externally rolled rim and a discontinuous groove on the shoulder. (Megalith 1.)

Type 46. Large bowl in light-red or dull-red ware, with traces of bright-red slip on the inner side, having a recurved and externally-beaded rim and a rounded base. (Megalith 3.)

Type 47. Variant of type 43, also in the Black-and-red Ware, with a slightly everted rim and tall sides. It is deeper than type 43. A single groove is found near the rim, below which is an incised decoration. (Megalith 1.)

Type 48. Similar to type 43, but with different graffiti. (Megalith 1.)

Type 49. Fragment of a bluntly-carinated bowl in the Black-and-red Ware, with a thin featureless rim and a rounded base. At the point of carination is a broad raised line, on either side of which runs a shallow channel-like depression. (Megalith 4.)

Type 50. Large bowl in the Black-and-red Ware, with a nail-head rim, a rounded body, straight sides and a slightly-flattened base. (Megalith 3.)

Type 51. Large bowl in the Black-and-red Ware, with a thick straight edge, grooves running just below the edge and a rounded base. (Megalith 1.)

Type 52. Carinated bowl in the Black-and-red Ware, with a flaring mouth, a featureless thin rim and a tapering bottom. It is distinguished by a prominent groove around the neck and a discontinuous one round the body. Comparable with type P8 of Brahmagiri.[1] (Megalith 5.)

Type 53. Similar to type 52, but larger in size and with a continuous groove round the body. (Megalith 5.)

Type 54. Carinated bowl in the Black-and-red Ware, with straight sides and a concavo-convex rim. A single groove runs immediately below the rim and three grooves run round the body above the carination. It is a rare type. (Megalith 5.)

Type 55. Vessel in the Black-and-red Ware, with traces of bright-red slip, having an internally-bevelled and externally-beaded rim, a thin groove immediately below the rim, several slanting incisions on the neck, a bluntly-carinated shoulder and a globular base. (Megalith 1.)

Type 56. Small vase of bright red-slipped ware, with a convex neck, an externally-bevelled rim and a globular body. A wide depression is noticeable on the neck below the rim and a single groove runs along the shoulder. (Megalith 5.)

Type 57. Similar to type 56, but slightly larger in size, with a flared mouth, a grooved neck and a thickened rim. Two depressions, one at the mid-height of the neck and the other at its base, and a deep and wide groove at the shoulder are visible. (Megalith 5.)

Type 58. Similar to type 57, but with a beaded rim and a ridge at the mid-height of the neck. (Megalith 5.)

Type 59. Similar to type 56. The depression below the rim forms a sort of a ledge. There is a faint groove at the junction of the neck and shoulder. A deep and wide groove appears on the waist. (Megalith 5.)

Type 60. Similar to type 57. There is a slight ridge at the mid-height of the neck. A deep groove runs round the waist. (Megalith 5.)

Type 61. Small pyriform vase in bright red-slipped ware, with a straight neck, an everted rim and a small flattened base. The depression below the rim forms a thin ledge. A faint groove along the waist is partially visible. (Megalith 5.)

[1] Wheeler, *op. cit.*, p. 215 and fig. 14.

Type 62. Similar to type 61, but with a prominent ridge below the rim and with different graffiti. (Megalith 5.)

Type 63. Small vessel of dark-red ware, with an externally-thickened rim, a wide depression below it, forming a ridge, a straight ridged neck, an elongated body and a flattened base. (Megalith 5.)

Type 64. Similar to type 61, but with different graffiti. (Megalith 5.)

Type 65. Similar to type 62, but larger in size, with a beaded rim and a prominent ledge. The neck is shorter and a groove runs along the junction of the neck and shoulder. (Megalith 5.)

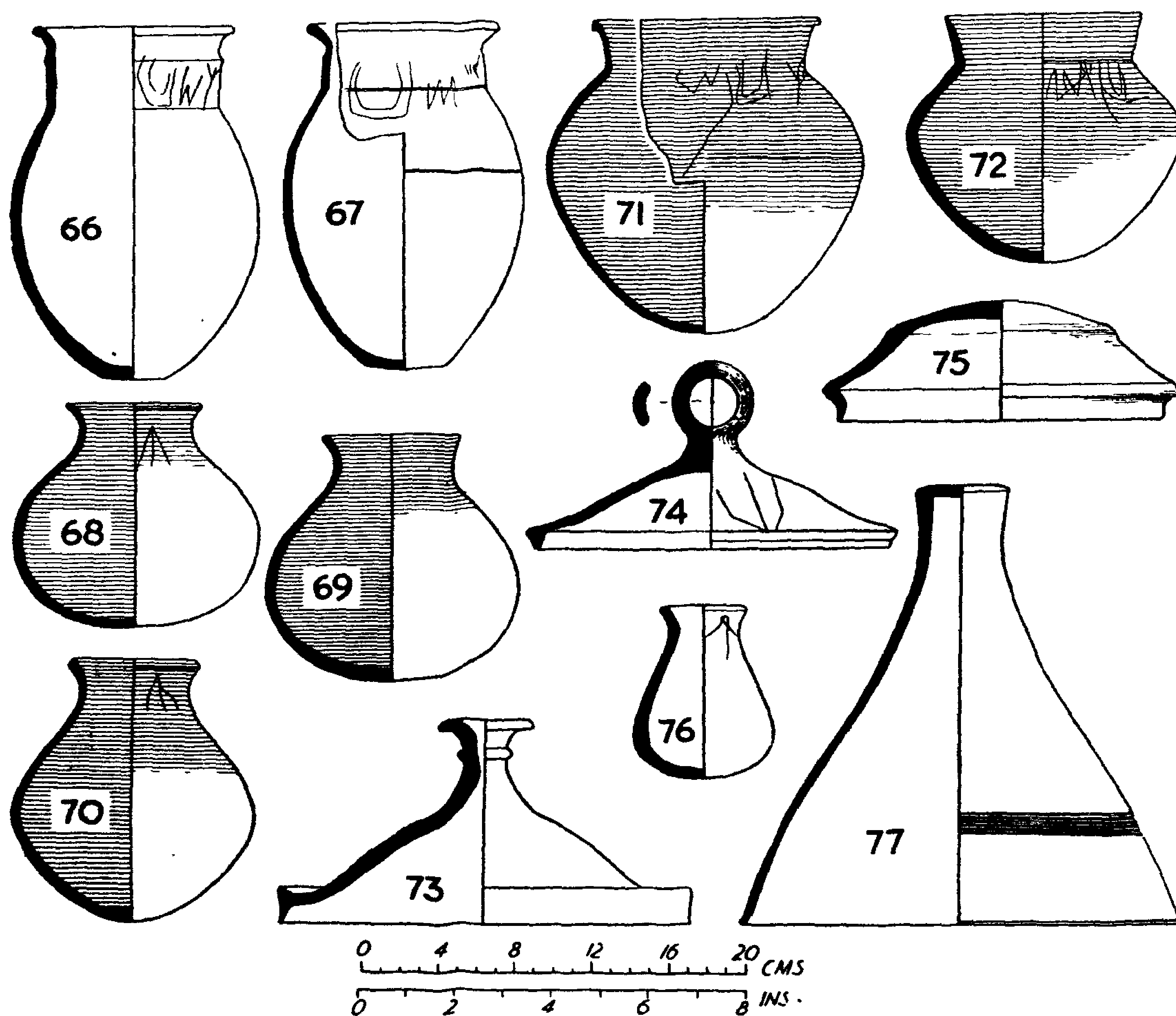


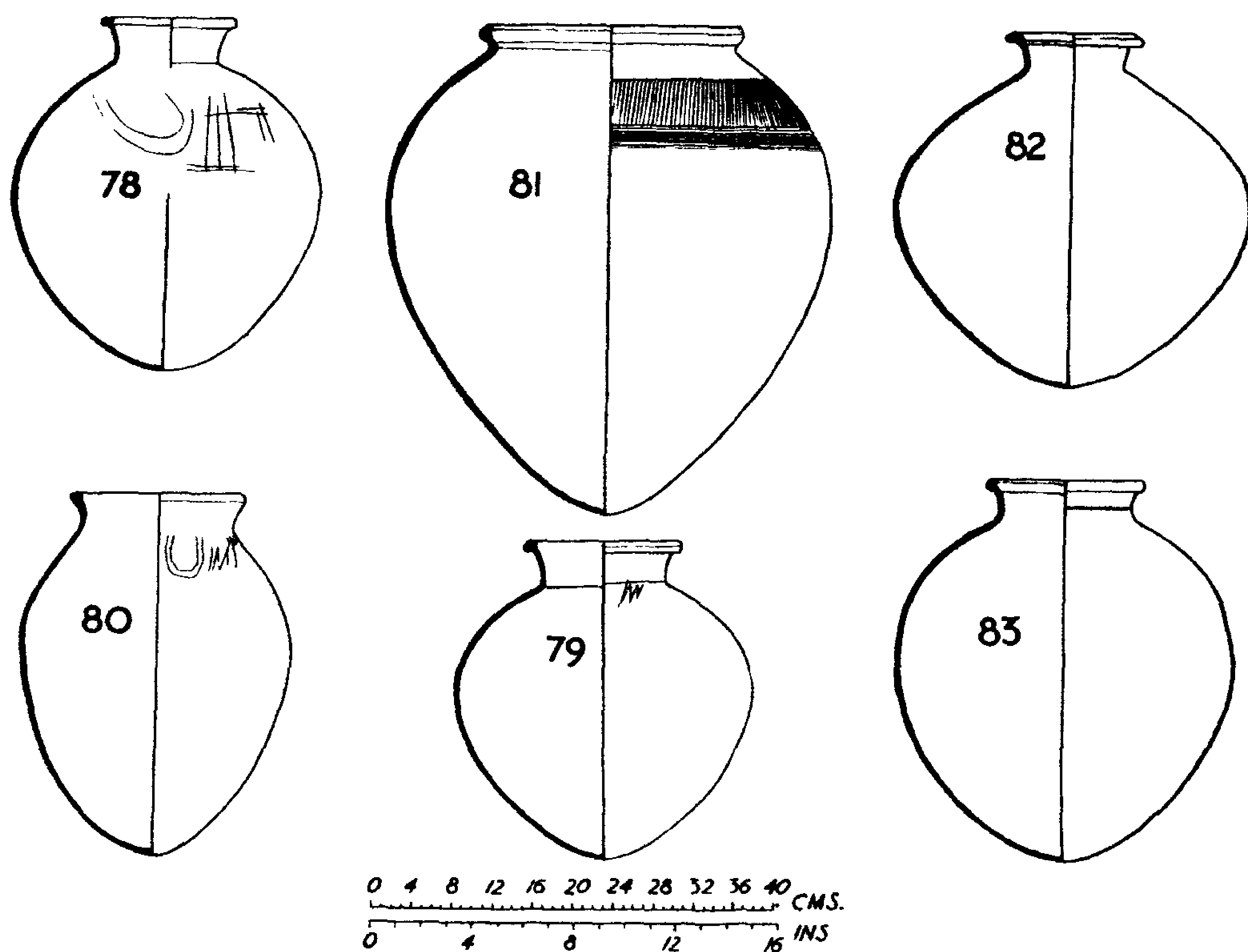
FIG. 6. *Pottery-types 66 to 77*

Type 66. Similar to 65, but with an everted rim and a longer neck. There are grooves running along the lower end of the neck and waist respectively. (Megalith 5.)

Type 67. Similar to type 65, but with a thick everted rim. (Megalith 5.)

Type 68. Vessel in the Black-and-red Ware, with a narrow mouth, a rounded rim, a prominent belly and a flat base. (Megalith 3.)

Type 69. Variant of type 68 but with a slightly elongated body and a sagger base. (Megalith 3.)



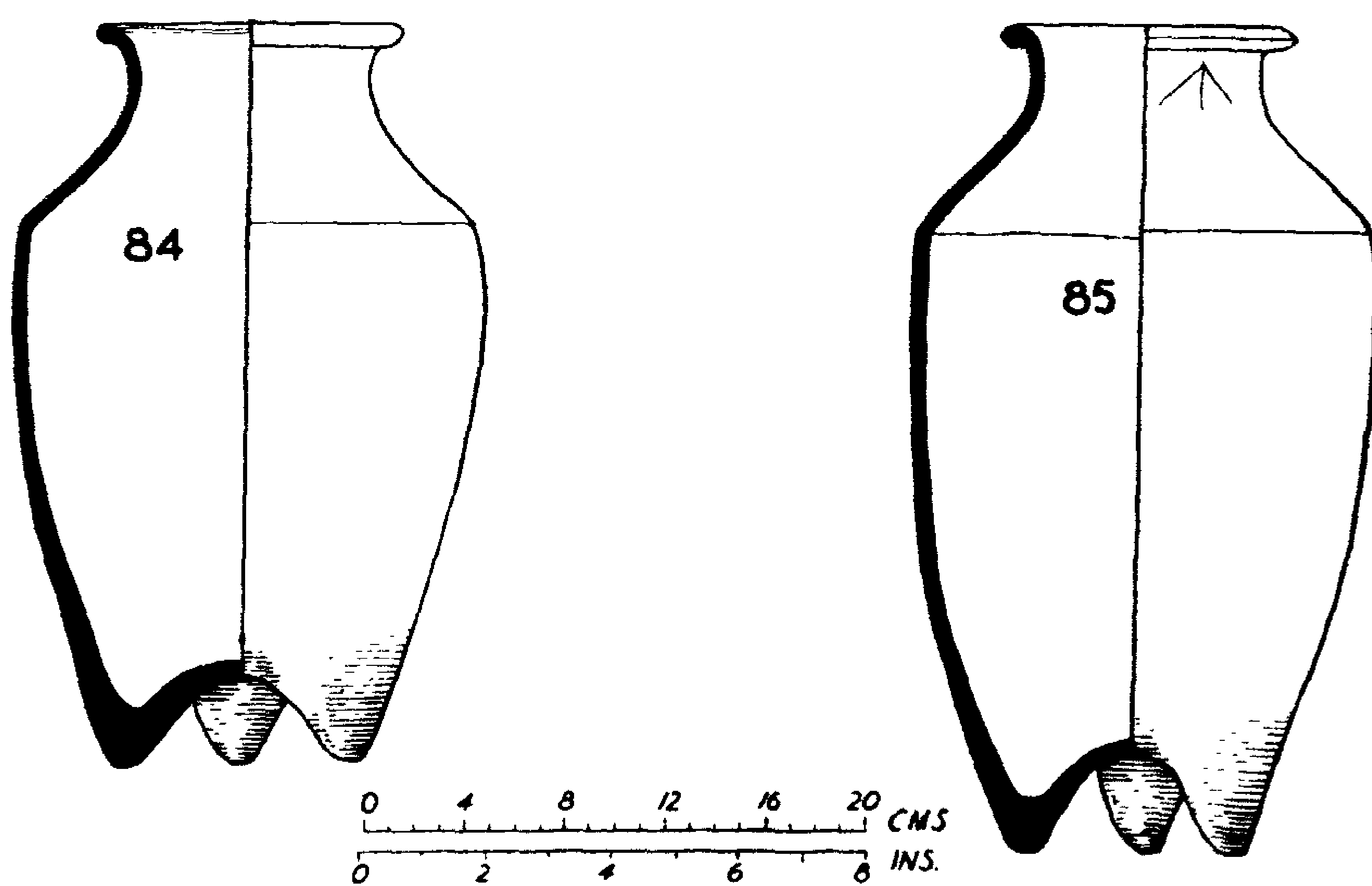


FIG. 7. *Pottery-types 78 to 85*

Type 70. Small vessel in the Black-and-red Ware, with a nail-head rim, a narrow mouth, a globular body and a rounded base. (Megalith 3.)

Type 71. Small vessel in the Black-and-red Ware, with an oblique neck, a beaded rim and a globular body. A groove runs along the waist. (Megalith 5.)

Type 72. Small vessel in the Black-and-red Ware, with a thin sharpened rim, a slightly flaring neck and a globular body. Two grooves run along the neck and the waist respectively. (Megalith 5.)

Type 73. Funnel-shaped lid in black ware, with an out-turned straight lip and a flaring bell-shaped semi-hollow applied handle having a raised ridge on the neck. At the edge of the lid is a broad deep channel-like depression which gives a sharp prominence to the rim. On the outside of the rim is a discontinuous groove. (Megalith 3.)

Type 74. Funnel-shaped lid in black ware, with a slanting straight lip and a solid ring-handle. Comparable with type P2 of Brahmagiri.[1] (Megalith 3.)

Type 75. Small bluntly-carinated lid in dull-red ware, with a featureless rim, a sharpened and outcurved lip and a rounded top. A shallow channel-like depression gives prominence to the curvature of the lip. (Megalith 3.)

Type 76. Small vessel in black ware, with a flaring mouth, a flat rim, a narrow neck, tapering sides and a sagger base. (Megalith 2.)

Type 77. Funnel-shaped lid in black ware, with a slightly-beaded rim, a flat top and six grooves running along in the body. It resembles type P4b of Brahmagiri[1] and like it was found in a pit-circle. (Megalith 5.)

Type 78. Water-vessel in dull-red ware, with a narrow mouth, a straight neck, a rolled and internally-grooved rim and a globular body. It has dark-red slip on the rim. (Megalith 5.)

Type 79. Globular jar, with a straight neck, a wide mouth and a beaded and internally-grooved rim. Red slip is traceable down to the waist, but the rest of the body is dull-red in colour. (Megalith 5.)

Type 80. Fusiform jar in dull-red ware, with a wide mouth and a thick beaded and internally-grooved rim. Dark-red slip is traceable from the visible inner side of the neck down to the waist, where four grooves mark its end. The rest of the body is dull-red in colour. (Megalith 5.)

Type 81. Large pyriform storage-jar in red ware and with a bright-red slip, having a wide recurved and thickened rim. Four grooves, with faint slanting linear incisions above them, run round just above the waist. (Megalith 3.)

Type *82.* Large water-vessel of dull-red ware, with a narrow mouth, an internally-grooved and rolled rim, a short straight neck and globular body. Patches of red slip are traceable on the neck. (Megalith 1.)

Type 83. Large pyriform jar in dull-red ware, with a thick recurved rim and a straight neck. The red slip has been allowed to run irregularly across the body. (Megalith 2.)

Type 84. Tall three-legged pot in dull-red ware, with a beaded and internally-grooved rim, a curved neck and a carinated shoulder. While the lower portion is hand-made, the upper one is wheel-made. The legs are applied. (Megalith 2.)

Type 85. Similar to type 84, but with graffiti. (Megalith 1.)

B. The Graffiti[2]

Graffiti, so common on the megalithic pottery of India, occurs on the Sanur burial-ware as well. Whatever they may represent—an alphabet, or potters' or owners'

[1] Wheeler, *op. cit.*, p. 215 and fig. 13.
[2] Contributed by Sri K. S. Ramchandran.

marks, or regular symbols such as are found on the punch-marked coins—they had certainly no funerary significance, as they occur as well on the comparable domestic pottery in the Black-and-red Ware and red and black wares from the habitational deposits at Sengamedu, Vriddhachalam Taluk, South Arcot District, a site with no megalithic association.

The graffiti on the Sanur pottery, all post-firing engravings, can be classified into thirtynine types, including variants (fig. 8). Of them, the pottery from Megalith 5 alone accounted for twentyeight, only types 1, 2, 3, 4, 5, 19, 24, 25, 34, 36 and 37 being absent therein. The most common symbol on the pottery of this megalith was the double 'U', or its variant the double 'V', resembling a double horse-shoe: only types 29, 31, 35 and 38 did not include this symbol. It should also be noted that the pottery from no other megalith bore it. The next symbols, in order of frequency, were the trident and its vague variant, the conventional tree, which, again, were confined to Megalith 5. The profuse occurrence of a few symbols in a particular megalith and their absence in others may not be without significance.

The types are described below.

Fig. 8

Type 1. A simple arrow-head, very common. Cf. Brahmagiri type 16.[1] (On pottery-types 18 to 21, 24 to 26, 29 to 31, 37 to 39, 43, 48, 68, 70, 74 and 85, Megaliths 1, 2 and 3.)

Type 2. Two arrow-heads slightly overlapping each other. Yazdani type 29.[2] (On a bowl, similar to pottery-type 41, Megalith 1.)

Type 3. Variant of type 1, but the central line projects upwards. (On pottery-type 47, Megalith 1.)

Type 4. An arrow-head with a circle enclosing the tip. (On pottery-type 40, Megalith 3.)

Type 5. An arrow-head, the top surmounted by a box-like figure. (On pottery-type 76, Megalith 2.)

(*Types 1 to 5 are variants of each other.*)

Type 6. A double 'U', followed on the right by three parallel vertical disconnected lines. (On pottery-types 61 and 35, Megalith 5.)

Type 7. Variant of type 6, but with several scratches on the right. (On pottery-type 36, Megalith 5.)

Type 8. Variant of type 6, but with five scratches on the right, besides an additional line on the right side of the outer 'U'. (On pottery-type 12, Megalith 5.)

Type 9. Variant of type 6, but the 'U's are made of several irregular scratches and have four vertical scratches on the right. (On pottery-type 32, Megalith 5.)

Type 10. A double 'U', beside which are three tapering lines, the bottom of which is delimited by a double horizontal line projecting on both sides. Just above the middle height of these lines are two other horizontal lines, the upper one projecting on both sides; over it, towards its right extremity, is a parallel line. Two vertical lines meet the lower horizontal line, the outer one projecting upwards to meet the upper line as well. The whole group may possibly represent a *piccottah*, a mechanism common in south India for drawing water from wells for irrigation. The double 'U' is a variant of Maski type 7[3] and Yazdani type 95. (On pottery-type 78, Megalith 5.)

[1] Wheeler, *op. cit.*, p. 246.
[2] G. Yazdani in *Jour. Hyderabad Arch. Soc.*, 1917, fig. facing p. 57.
[3] Thapar, *op. cit.*, fig. 29.

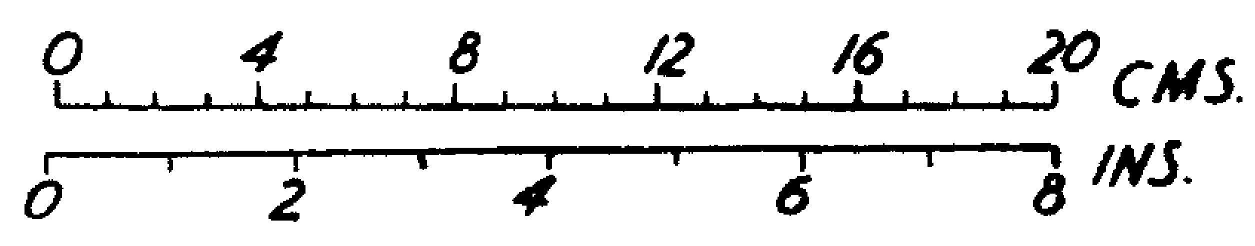


FIG. 8. *Graffiti*

Type 11. A double 'U', followed on the right by four slanting lines in groups of two, their tops connected by two horizontal lines. The second vertical line from the right projects a little above the top horizontal one. On the top is a slanting line, ending with the bottom horizontal line. To the right, connected with the lower horizontal line, are two lines intersecting each other, with a vertical line projecting upwards from the point of intersection. (On pottery-type 53, Megalith 5.)

Type 12. A double 'U', followed successively on the right by two symbols respectively resembling a 'W' and a 'Y', the latter having an additional prong and thus resembling a tree. (On pottery-type 58, Megalith 5.)

Type 13. Variant of type 12, the third symbol resembling a trident. (On pottery-type 66, Megalith 5.)

Type 14. A double 'U', with a four-branched tree and a 'W' on the right. (On pottery-type 60, Megalith 5.)

Type 15. A double 'U' with connected chevrons and a six-branched tree on the right. (On pottery-type 67, Megalith 5.)

Type 16. A double 'U', followed on the right by a 'Y' with a vertical line hanging from the tip of the left prong and connected chevrons. (On pottery-type 59, Megalith 5.)

Type 17. A 'W', a trident and a double 'U'. Same as type 13, but with the positions of the symbols altered. (On pottery-types 9 and 33, in the latter case with a variant of the double 'U', Megalith 5.)

Type 18. A 'W', with an oblique upward line on the upper tip of the left arm, a curved line running downwards, a double 'U' and a four-branched tree. (On pottery-type 71, Megalith 5.)

Type 19. Two groups of double parallel vertical lines connected at the top by a double horizontal line, the whole design resembling door-jambs with a lintel. Variant of Yazdani type 76. (On pottery-type 42, Megalith 1.)

Type 20. A 'V', another 'V' with two oblique strokes parallel to the two prongs and a double 'U'. The first 'V' is comparable with Maski type 9 and Yazdani type 7. (On pottery-type 11, Megalith 5.)

Type 21. A tree, a double 'V' (variant of double 'U'?) and several connected chevrons. The tree is a variant of Maski type 1 and Yazdani type 11. (On pottery-type 17, Megalith 5.)

Type 22. A trident, an incomplete double 'U' and several connected chevrons. The trident is comparable with Yazdani type 34. (On pottery-type 16, Megalith 5.)

Type 23. A 'Y', a double 'U' and several connected chevrons. (On pottery-type 56, Megalith 5.)

Type 24. Two horizontal lines, the upper shorter than the lower, with another horizontal line below, connected with one another by two vertical lines, to the right of the first of which is another shorter vertical line. To the right of the verticals and between the horizontal lines are two almost parallel oblique lines which cut across the lowest horizontal line. The left arm of a 'V', which has its base below the lowest horizontal line, intersects these oblique lines. Typologically the design is unique; it is also peculiar in that it occurs on the inner side of a ring-stand in contradistinction to other graffiti, which invariably occur on the exterior. (On pottery-type 32, Megalith 1.)

Type 25. Two inverted 'N's, one within the other. (On pottery-type 51, Megalith 1.)

Type 26. Several connected chevrons, a trident and a single chevron with an additional vertical line within. (On pottery-type 7, Megalith 5.)

Type 27. A double 'U' and several connected chevrons. (On pottery-type 62, Megalith 5.)

Type 28. Several connected chevrons, a trident and double 'U'. (On pottery-type 13, Megalith 5.)

Type 29. Three connected chevrons. (On pottery-type 79, Megalith 5.)

Type 30. An inverted 'V' with an attached looped line, a trident and a double 'U'. (On pottery-type 10, Megalith 5.)

Type 31. An 'N', a 'W' and a trident. (On pottery-type 65, Megalith 5.)

Type 32. A double 'U', the outer one incomplete at the base, a double chevron and a vertical line. (On pottery-type 57, Megalith 5.)

Type 33. A trident, a vertical line, a double 'V', the right arm of the outer one formed by crooked lines, and several connected chevrons of different sizes. (On pottery-type 63, Megalith 5.)

Type 34. Three vertical lines, the middle one prominently oblique. (On pottery-type 6, Megalith 2.)

Type 35. Two roughly vertical lines, two short strokes and two connected chevrons with a vertical line hanging downwards from the right extremity. (On pottery-type 14, Megalith 5.)

Type 36. A short and a long oblique lines. (On pottery-type 28, Megalith 2.)

Type 37. A long curved line with a short vertical hanging from its upper end to form an acute angle. (On pottery-type 41, Megalith 1.)

Type 38. Two parallel vertical lines and several connected chevrons. (On pottery-type 64, Megalith 5.)

Type 39. Two intersecting 'N's, a trident intersected by the right arm of the outer 'N' and a double 'U' with a horizontal line connected with the base of the outer 'U' and a curved one hanging downwards from its left arm. (On pottery-type 72, Megalith 5.)

8. OTHER SMALL FINDS

A. Iron objects

The excavated megaliths yielded numerous iron objects, many of them in a bad state of preservation. The number of objects and their types (figs. 9-11) in each tomb were as follows:

Megalith 1.—Nineteen: the spear (similar to type 2), the tanged dagger and knife (type 9) and the hook (similar to type 14).

Megalith 2.—Twentysix: the spear (similar to type 2), the bar (types 4 and 6), the tanged dagger or knife (type 8), the wedge (similar to type 12), the hook (types 15 and 16), the spear- or arrow-head (type 23) and the sickle (type 25).

Megaliths 3 and 4.—Respectively three and two, all fragmentary.

Megalith 5.—Seventyone: the spear (types 1 to 3 and 5), the knife or dagger with tapering ends (type 10), the wedge (types 11 to 13), the hook (type 14), the tanged arrow-head (types 17 to 22), the knife (type 24) and the horse-bit (type 26).

Sometimes iron objects, mostly arrow-heads, were found beneath the sarcophagus. In Megalith 5 a group of arrow-heads was found dumped inside a vessel in the Black-and-red Ware. Otherwise, the objects were huddled in all possible directions.

Of the types, the horse-bit and flat bar deserve special mention. Horse-bits were obtained from the cairn-packing in Megalith 2 (dolmenoid cist) and from inside the pit in Megalith 5. Even in their mutilated form, they leave no doubt as to their shape and utility. Produced by the bending of the side-bar into larger upper and smaller lower loop, so that the upper and lower parts of the mouth of the animal could be pressed in position, the specimens are unique. The corresponding objects of the Bronze Age in western Europe and of the Iron Age in Britain mostly have a linked bit and either

vertical side-checks with the side-loops or simply side-rings to fasten the strap but not a solid cylindrical transverse mouth-piece and arched upper and lower checks. The specimens from Guntakal, District Anantapur, and from Adichchanallur, District Tirunelveli (now in the Madras Museum), have cylindrical mouth-pieces like the Sanur ones but do not have the arched fittings: they have either an oblong lower portion and terminal outward loop at the top just above the extremities of the mouth-piece or have mere vertical side-checks with broad triangular side-buckles to fasten to the strap.

Two thick flat objects, with a socket-like folding at one end and a bevelled working-edge at the other, both from Megalith 2, need some consideration. About similar objects found at Glastonbury, an early Iron Age site in England, it has been said: '...much iron went not only to make tools, weapons, and useful appliances of many kinds, but to furnish the medium of commerce itself—that is, a currency. This took the form of long, flat iron bars, pinched up at one end, perhaps derived from the roughouts for sword blades, but standardized in weight. They must have been cumbersome to handle, but are found here and over a wide area in the south-west of Britain.'[1] These specimens are ascribable to the first centuries B.C.-A.D. A fragmentary object, also classed as a currency-bar, was found in Maiden Castle, Dorset.[2] Similar objects are reported from several other places in England in almost the same chronological horizon as the Glastonbury ones.[3]

Among the iron objects from Sanur, twentysix are described and illustrated here, the rest being either duplicates or fragments of indeterminate shapes.

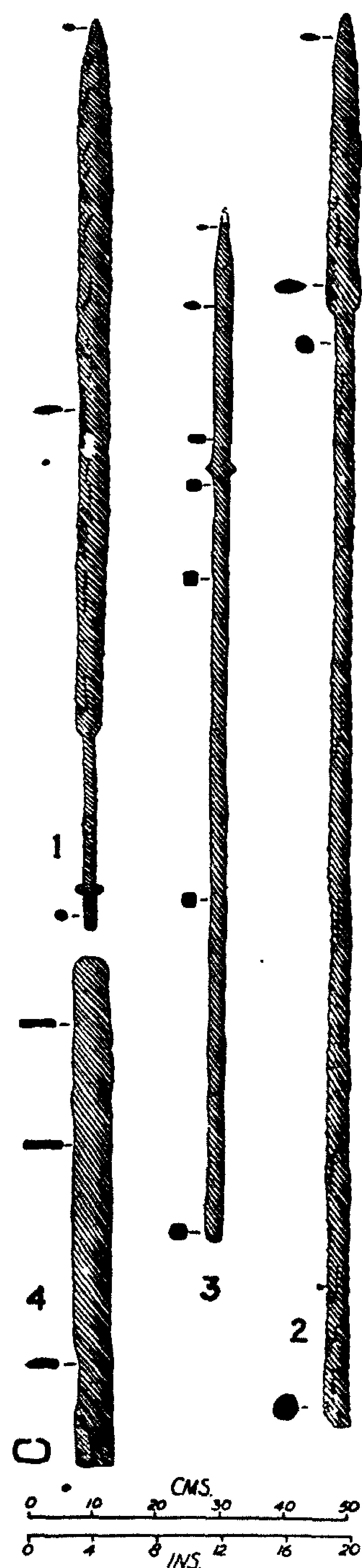


FIG. 9. *Iron objects, types 1 to 4*

Figs. 9-11

Type 1. Spear. (Megalith 5.)

Type 2. Spear. (Megalith 5.)

Type 3. Spear with an oblong cross-section. (Megalith 5.)

Type 4. Bar with a pointed tip and socketed end. (Megalith 2.)

Type 5. Spear. (Megalith 5.)

Type 6. Bar with a pointed tip and socketed end. (Megalith 2.)

Type 7. Tanged knife or dagger with the tip and portions of the tang missing. (Megalith 3.)

Type 8. Tanged knife or dagger. (Megalith 2.)

Type 9. Tanged knife or dagger. (Megalith 1.)

Type 10. Knife or dagger with tapering ends and a lenticular section. (Megalith 5.)

[1] Christopher and Jacquetta Hawkes, *Prehistoric Britain* (Harmondsworth, 1952), pp. 144-45.
[2] R. E. M. Wheeler, *Maiden Castle, Dorset* (Oxford, 1943), pp. 227 and 383-85 and fig. 90, 10.
[3] *Ibid.*, p. 384.

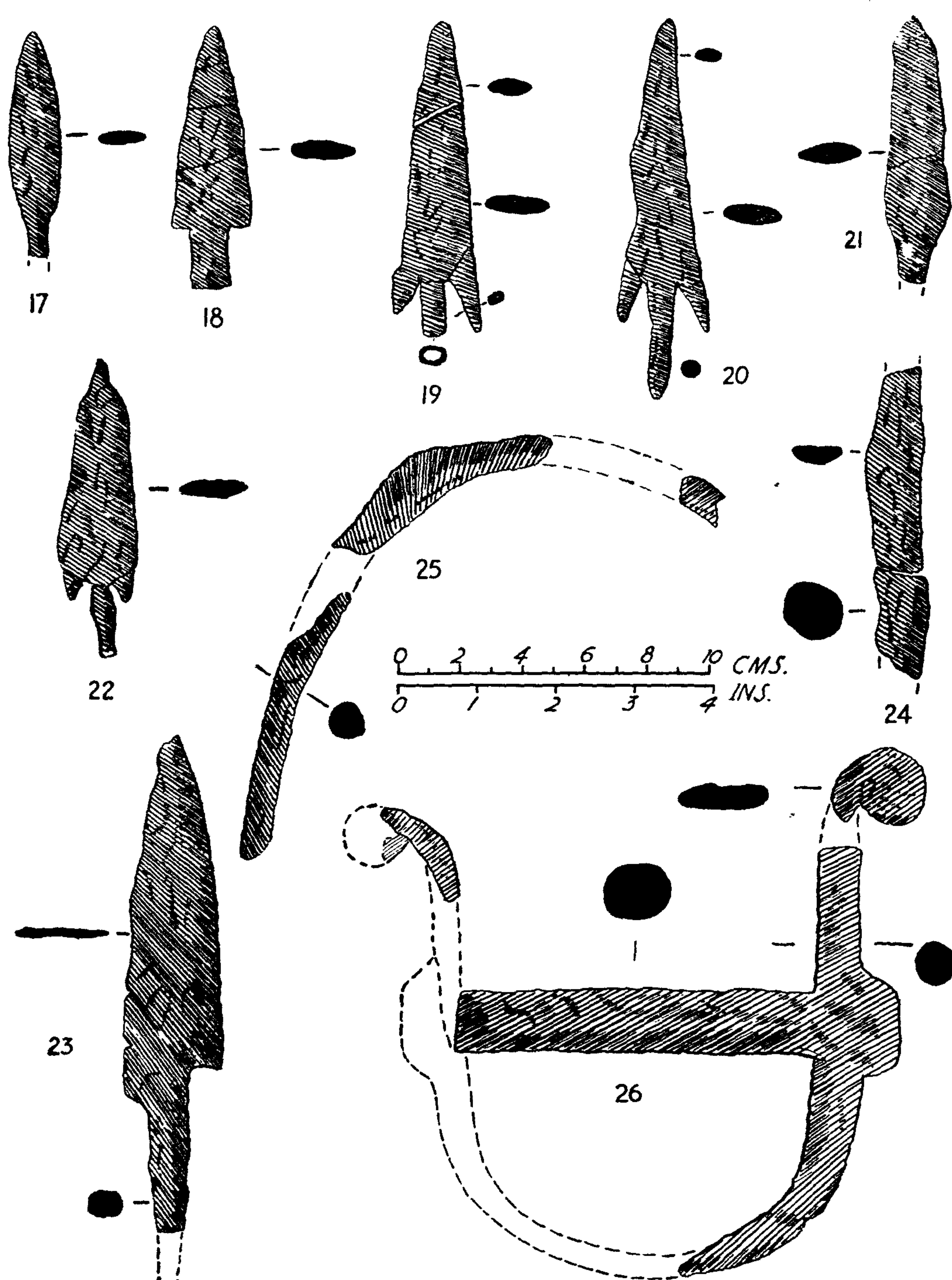
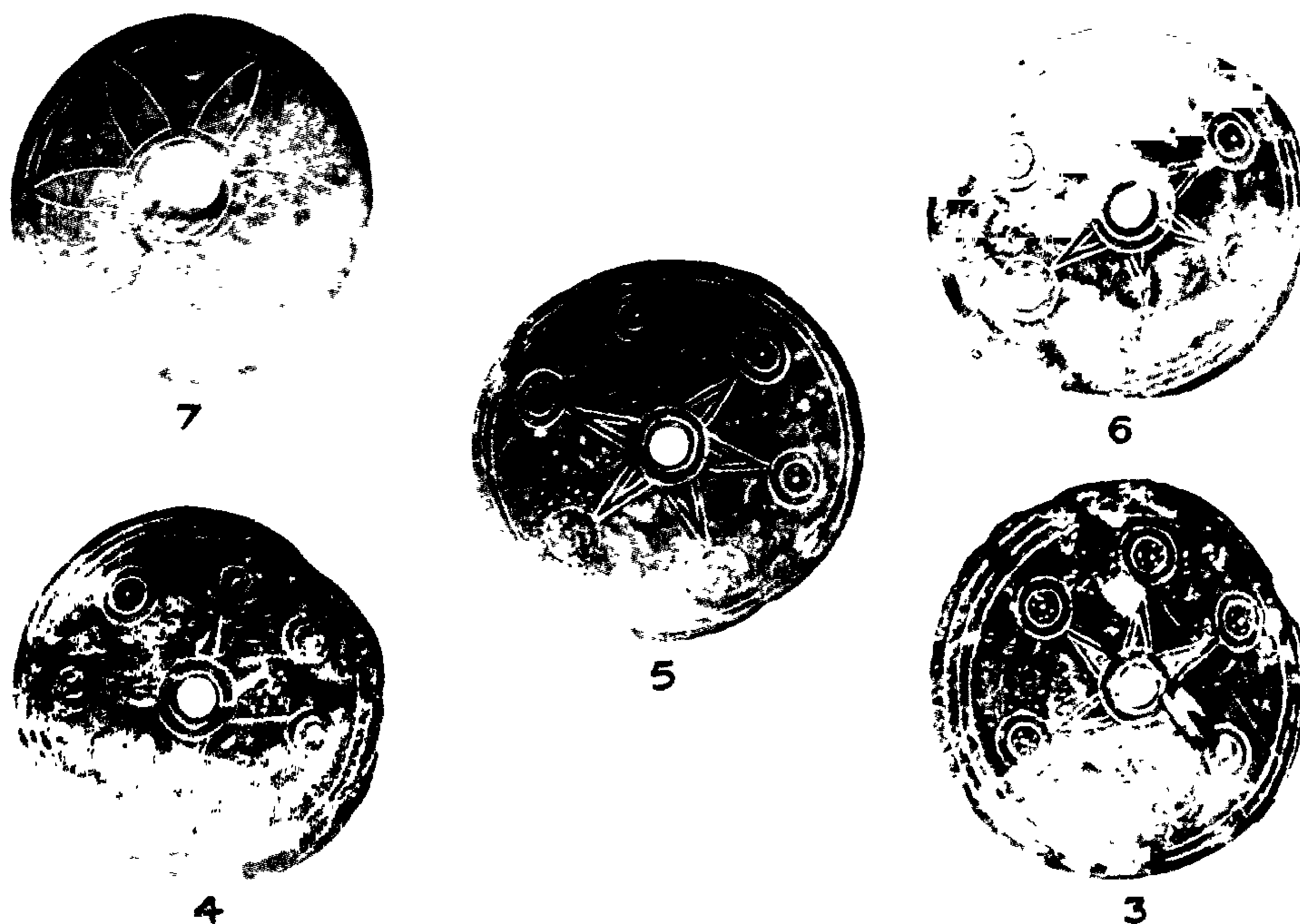


FIG. 11. *Iron objects, types 17 to 26*

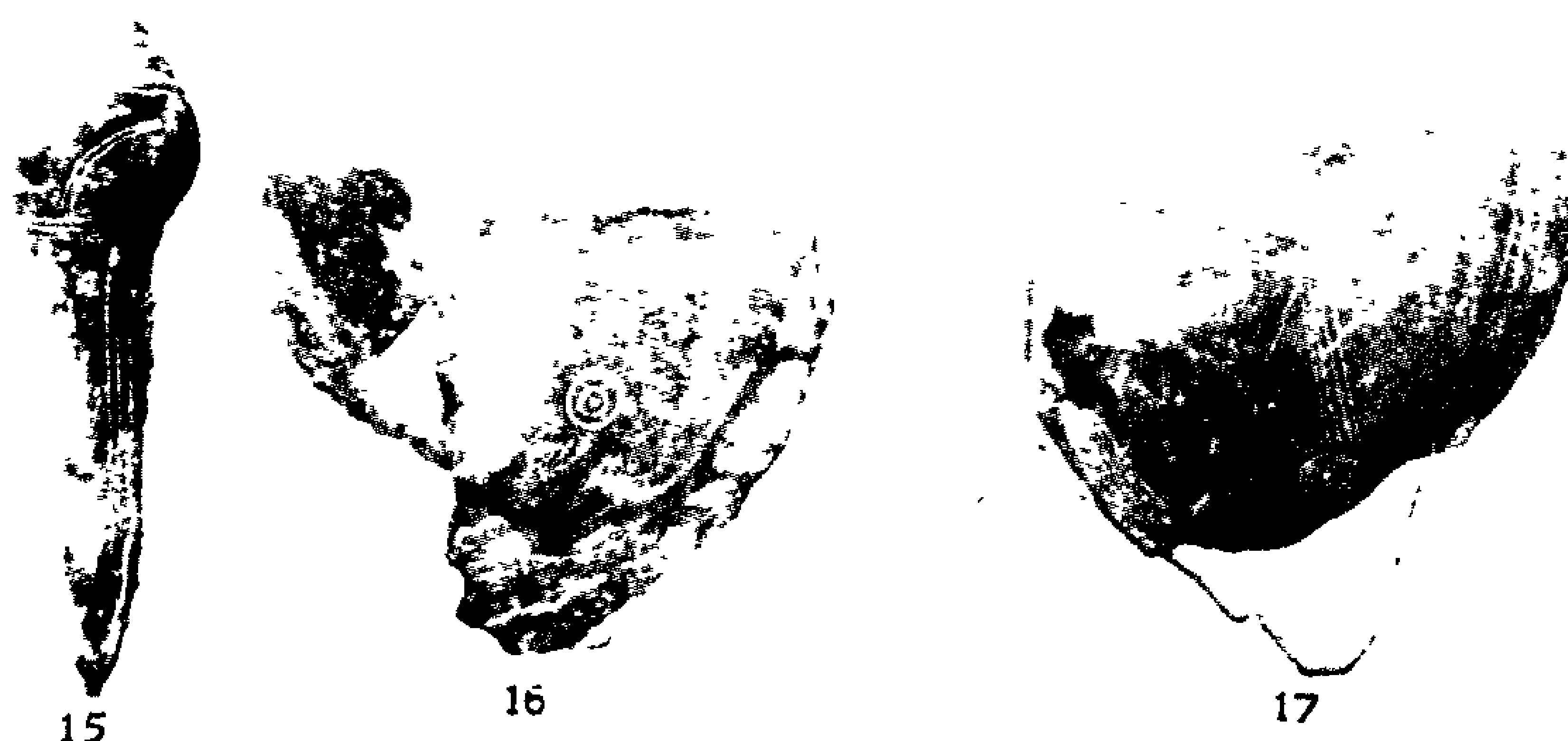


A. *Shell discs from Megalith 5. Scale* [illegible]. *See p. 39*



B. *Shell beads from Megalith 5. Scale* [illegible]. *See p. 39*

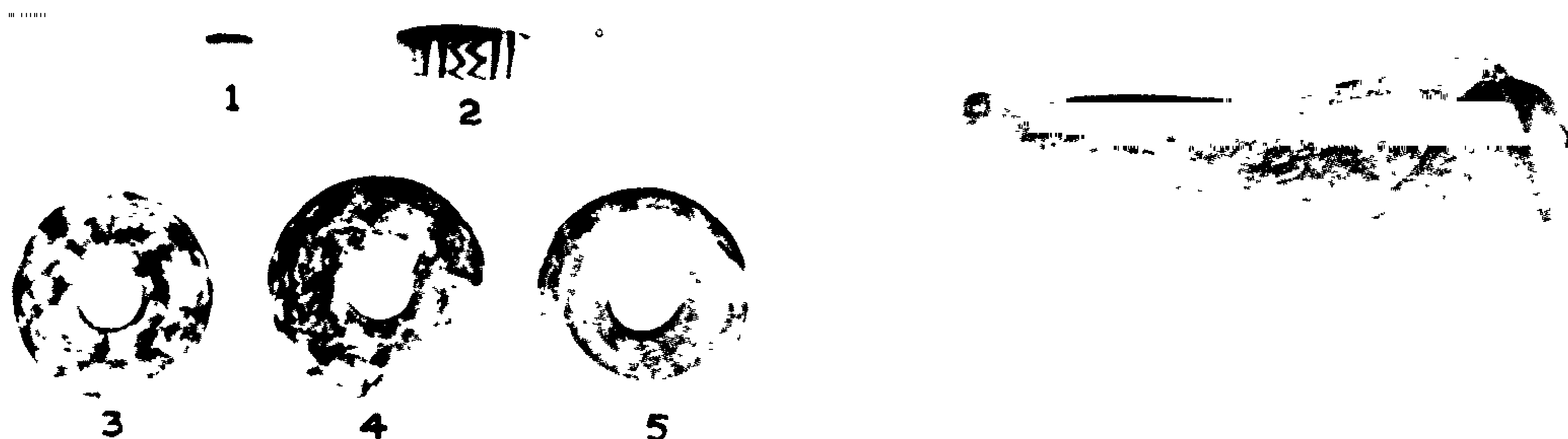
To face p. 38



A. *Decorated shells from Megalith 5. Scale $\frac{1}{2}$. See p. 39*



B. *Stone objects, 1, from Megalith 2, and 2-5, from Megalith 5. See p. 39*



C. *Beads, 1 and 2, carnelian, from Megalith 3, 3 to 5, terracotta, from Megaliths 2 and 5. Scale $\frac{5}{8}$. See p. 40*

D. *Terracotta figurine, from Megalith 2. Scale $\frac{1}{3}$. See p. 40*

Pls. XIX and XX A

1. Object with four segments, apparently cut from the columella of conch-shell into the shape of a bead with an iron rod inserted for reinforcement. The two ends are pointed and closed. (Not illustrated.)

2. Similar to above. Disintegrated. (Not illustrated.)

3. Disc, probably ear-ornament, with a central hole encircled by an incised double circle, from which shoots out a six-pointed star. The points of the star each consist of a double circle filled with dots and are connected with the centre by conical double lines. The whole design is bounded on the exterior by three concentric circles, of which each line is hatched with evenly-spaced vertical dashes.

4. Similar to 3. Slightly disintegrated.

5. Similar to 3, but with only a single dot in each point of the star.

6. Similar to 5, but with the vertical hatchings present only in the two outermost circles.

7. Disc, around the central hole of which run two concentric circles. From the central outer circle springs a six-petalled lotus. The whole design is bounded on the exterior by two concentric circles.

8-13. Long barrel-shaped beads with longitudinal hole.

14. Small gadrooned bead.

15. Young conch-shell decorated and flattened at the back, maybe a pendant. There are three holes made in alignment, the topmost of which is the largest. The fourth hole is the natural cavity of the shell itself. The holes probably served to pass two sets of strings. On the upper side are three separate bands, of the four vertical lines of which the third is a wavy line running from top to bottom. The bulbous part of the shell is demarcated by two bands of four horizontal lines, one of which is wavy. In the portion enclosed by these bands are found two sets each of two curved lines shooting from the central vertical band and joining at the two ends of the bulbous part. The curved lines are further hatched with vertical dashes. The central vertical band of four lines stops short at the lower band of horizontal lines and is again continued from the outer or upper horizontal band of lines upwards. Beyond the upper horizontal band and in between the vertical bands are two small circles, each with a deep dot in the centre, resembling the eyes of some animal. Probably, the decorative pattern is based on the figure of a serpent with its hood spread out. Slightly disintegrated.

16 and 17. Two fully-grown conch-shells with their columella and apexes removed, the bulbous surface incised with decorative designs, consisting of six concentric double circles arranged to form two triangles with opposite bases and with their apexes turned inwards, the apexes being joined by double-lined chevrons. The other circles are interconnected by a band of four discontinuous lines.

C. Stone objects

Five stone objects were obtained from two megaliths, viz. Megalith 2, which yielded a spherical ball, and Megalith 5 which yielded two pestles and one each of quern and whetstone.

Pl. XX B

1. Spherical ball of creamy quartz with a polished surface. (Megalith 2.)

2. Conical pestle of granite, roughly round in section and a completely round depression for grip in the centre. (Megalith 5.)

3. Roughly cylindrical pestle of quartzite, ovoid in section. (Megalith 5.)

4. Circular hollowed quern of granite. (Megalith 5.)
5. Ovoid whetstone of quartzite, working-area slightly damaged at one end. (Megalith 5.)

D. Beads

Two carnelian and ten terracotta beads were obtained from the megaliths, besides the shell ones mentioned above (p. 37). Of the two carnelian beads, both barrel-shaped, the longer one was etched and the smaller plain. The terracotta beads were simple whorl-beads, comparable with those from Brahmagiri.[1]

Pl. XX C

1. Long barrel circular bead of carnelian. (Megalith 3.)

2. Long barrel circular bead of carnelian. The etched design consists of two parallel bands of chevrons flanked on either side by a band of double lines. (Megalith 3.)

3-5. Whorl-beads of terracotta. (Megaliths 2 and 5.)

E. Terracotta figurine (pl. XX D)

A solitary ill-baked terracotta figurine, representing an unidentifiable animal, was discovered from the cairn-filling of Megalith 2. The figurine has a constricted belly; its heads and legs are broken.

Appendix

PRELIMINARY REPORT ON SKELETAL REMAINS

By H. K. Bose

The excavated skeletal remains were mostly in a very bad state of preservation. They were distorted, crushed out of shape and, in some cases, disintegrated to such an extent that their restoration and reconstruction are not easy. They were also found embedded in a very hard matrix of *kankar* and lime. None of the bones bore any evidence of charring. The skulls are being treated and broken up for reconstruction, after which a fuller report will be made available.

Megalith 1

None of the five sarcophagi contained any human relics, except Sarcophagus C, which contained a few bits of human teeth.

Megalith 2

Apart from a large assemblage of small bits of human bones almost everywhere in the earth-filling of the dolmen-chamber, interesting human remains were found in the three sarcophagi (above, pp. 19-20).

Sarcophagus A.—It had the largest number of disarticulated human bones (nearly twenty in number) and numerous other fragments of small bones buried in between the thin deposit of earth and the bottom of the sarcophagus, scattered all over, but particularly restricted in an area of about 6 sq. ft. in the eastern half, with two skulls placed apart in two different directions. It appears to

[1] Wheeler, *op. cit.*, pl. CXIX, 5 and 6.

have been a case of double burial, probably comprising the excarnated sketelal remains of two individuals.

One of the skulls, A, lay almost in the centre of the eastern bend of the sarcophagus on its right parietal region, its vertex pointing to the east. The left parietal region, pointing upwards, was completely smashed, with only some of its components, dislodged from their original positions, sticking here and there. The lower jaw, dislodged from its sockets, lay a few inches below. Due to distortion, it had assumed a rather longish ovoid shape. The hind parietal bones had sunk a little, and in consequence the occipital bone had bulged out, almost on the point of overlapping the former. The facial portion, including the nasal bones and the upper jaw, was broken. Some of the facial and mastoid bones had also sunk inwards.

The vault of the skull gradually rises from the glabella up to the vertex and thereafter recedes in the same manner backwards, up to the external occipital protuberance. The sagittal, coronal and lambdoidal sutures are present. The mastoid processes are small and in the supraorbital ridges not prominent, suggesting that this skull is probably that of a female. To judge fiom its present condition, it can approximately be classed as hyper-dolichocranial, having a cephalic index of 61·92 (?); its length and breadth are 197 (?) mm. and 122 (?) mm. respectively.

The other skull, B, lay 10 in. to the west of the first, touching the southern wall of the sarcophagus with its left parietal region resting partially on a jumble of bones below it. Its frontal part leaned somewhat towards the east and excepting for parts above the supraorbital region, portions down below had completely decayed. So was the case with the other parts of the right parietal region near the mastoid process. Its lower jaw could not be traced. The bones comprising the vertex, though present, were all broken. Portions from the glabella downwards, including the upper jaw, had been badly crushed and distorted. No trace of the nasal or auricular bones could be found, only the earthen core, suggesting the places covered by them, being identifiable. Some of the teeth of the upper jaw could be found in their sockets, all having leaned towards the right side, overlapping one another dislodged from their original positions.

Though, like the first skull, this skull is also dolichocranial, having a cephalic index of 69·75 (?), length and breadth 205 (?) mm. and 143 (?) mm. respectively, it is much larger, broader and higher in proportion, with thick bones as of a sturdy male adult. It appears that the sagittal suture has closed, but nothing definitely can be said about the other characters on account of the distortion of the skull.

Some of the long bones, a femur and a humerus were placed in a manner almost touching the lower jaw of the first skull and extended forward to the west in the centre; others radiated from the south-west and still others from the northern edge, extending to all conceivable directions and placed one above the other in a jumbled fashion. These consisted of four femora, two humeri, three pelvic bones, one tibia and three to four fragments of radius and ulna. The topmost bone, a femur, was found articulated in position in its acetabular cavity of the pelvic bone.

Sarcophagus B.—This was found to contain only a few pieces of human bones scattered all over the bottom.

Sarcophagus C.—This too had a few fragmentary human skeletal remains scattered all over the bottom and two small pieces of long bones.

The condition of the long bones was very bad; they were invariably broken in many parts and hence their overall shape could not be made up. The end-pieces were also broken or decayed in almost all cases.

Megalith 5

Groups of disarticulated human and animal remains were found huddled together in different corners of the same pit at different depths and on the floor-level at the bottom, mixed up with iron objects and pottery.

Western group.—A few bits of long and other bones, including some stray pieces of human skull, teeth, mandible and other bones, were found scattered all along the entire western side of the pit, but mostly in the north-west corner at different depths. They were presumably of more than one

individual and consisted of eighteen fragments of skull, maxilla, teeth, etc.; twelve fragments of phalanges; two fragments of fibulae; four fragments of ribs; ten fragments of other long bones and seven fragments of animal bones.

NORTHERN GROUP.—A group of disarticulated human and animal bones, all mixed up together, was found in a jumble in the centre of the northern edge of the pit, with iron objects placed over and under them. The group consisted of: the left lower end of an adult femur; two broken parts of the frontal and other bones of the skull; four broken parts of the shaft of femur; six fragments of long bones; a head of the femur; a broken part of a talus; eight broken parts from the body of vertebrae; a broken part of an ulna; four fragments of phalanges; eight unidentified broken parts of long and other bones; and four animal bones.

NORTHERN-EASTERN GROUP.--Another group, mostly disposed of in the north-east corner, consisted of the following: the head of an adult femur; two left maxillary parts with a little zygomatic arch of an adult; eight fragments of long and other bones; and four fragments of animal bones.

CENTRAL GROUP.—The central group of skeletal remains lay on the floor-level of the pit, over a few inches of sandy brown earth, in an area of about 5 ft. ×2 ft. 6 in. and was placed almost in its centre but slightly towards the northern edge. It comprised of: a broken skull; eight broken pieces of mandible and teeth; a head of a femur; two phalanges; four broken ribs ; six fragments of the shaft of a humerus; six fragments of fibulae; two fragments of the radius; two fragments of the tibias; ten fragments of the femur; four fragments of the ulna; two fragments of the scapulae; two fragments of the vertebrae; two fragments of the metatarsals; eight fragments of pelvic bones; and two fragments of animal bones.

This group of bones started with the femur placed in a north-south direction, a few inches away from the skull, its one end resting on the top of the upper pelvic bone, where two of them were placed one above the other, at the southern end. The central portion was less crowded than the entire line on the north and the south. The second femur was the other demarcating line enclosing the group at the western end; it lay in a slightly slanting position from the north-west to south-east, the head resting underneath the pelvic bone at the southern end. In between the two were the tibias, fibulae and broken parts of other long bones. All the bones were arranged in a line extending from the west to east and ended with the skull to the extreme east. Excepting the skull and the femur to the east, which were disjointed from the rest of the group, all were kept huddled together, placed one above the other, the end-parts of the long bones, placed in a north-south direction, being covered by the northern line. All the bones were in a very bad state of preservation. The soft spongy bones, like the pelvic ones, were totally decomposed; others were pulverized beyond recognition, and, in some cases, their shapes were maintained only by the core of earth.

The skull and the mandible, along with some other bones, were all placed on the eastern side, isolated from the rest. The skull, complete with almost all its components excepting the naso-maxillary portion, was found in a crushed and distorted condition; it lay in a tilted position resting on the right parietal region, with the upper jaw facing east and the occipital region facing north. The left parietal region, which was on the top, had a wide long crack from the zygomatic process, running throughout the entire length of the skull, the bony portions covered by this crack having been driven inside.

The mandible, dislocated from its proper position, lay broken sticking below the maxilla. There were no teeth in the sockets of the maxilla, but a few fallen teeth were found on the floor.

The lower jaw was found broken in many parts. All the teeth were not present; some were out and the last molar had not erupted.

The skull belongs to a young adult. The left mastoid bone is well-developed. The nose can be termed as a fine nose, though the right bone was sunk inwards.

The species represented by the animal bones are: *Bos indicus* Linn. (the domestic humped cattle of India); *Ovis vignei* Blyth (the domestic sheep); *Capra sp.* (the goat); the wolf or hyena (?); and *Gallus sp.* (the domestic fowl).

[*Received on the 26th February 1959.—Ed.*]

THE TEMPLES OF KHAJURAHO IN CENTRAL INDIA

By Krishna Deva

CONTENTS

1. INTRODUCTION

KHAJURAHO, situated in Chhatarpur District of Madhya Pradesh in the heart of central India, has the distinction of possessing one of the most compact and homogeneous groups of temples (pl. XXI), ranging in date from the late ninth to the twelfth centuries A.D.

The tract round Khajuraho was known during ancient times as Vatsa, in medieval times as Jejābhukti or Jejākabhukti, and since the fourteenth century as Bundelkhand. In the cultural sphere, this region played a significant rôle in Indian history from *circa* 200 B.C. and witnessed a remarkable efflorescence of sculptural and architectural arts during the Śuṅga period, with Bharhut as a centre, and again during the Gupta times, with leading centres at Bhumara, Khoh, Nachna and Deogarh. The Pārvatī temple at Nachna, the Śiva temple at Bhumara and the Daśāvatāra temple at Deogarh form significant stages in the evolution of Gupta architecture. The somewhat later Chaturmukha-Mahādeva temple at Nachna, one of the earliest typical *śikhara* temples of north

India, is even more important and constitutes a landmark in architecture, marking the transition between the Gupta and the medieval temple-styles. The building-tradition was continued by the Imperial Pratīhāras (eighth to tenth centuries), who left in this region two of their finest temples, viz. the Jarai Mātā temple at Barwasagar, District Jhansi, and the Sun temple at Mankhera, District Tikamgarh, both assignable to *circa* ninth century. Under the Pratīhāra supremacy, simpler shrines of a provincial style, made of granite, were also erected in this region at sites like Mau-Suhaniya,[1] Kainri and Chamarua, all located in District Chhatarpur.

It is against this background that the Chandellas emerged during the early tenth century as a strong central Indian power with one of their capitals at Khajuraho. Under the patronage of the Chandella princes, who were great builders and connoisseurs of arts and letters, Jejākabhukti was blessed with prosperity and political stability and was swept between the tenth and twelfth centuries by a cultural upheaval manifesting itself in a substantial literary output and the flowering of an architectural movement of uncommon charm and vigour. The Chandella court was adorned by poets like Mādhava, Rāma, Nandana, Gadādhara and Jaganika and by the dramatist Kṛishṇamiśra, author of the *Prabodhachandrodaya*. Among the princes Gaṇḍa and Paramardin were themselves poets of no mean merit, while Dhaṅga and Kīrttivarman were liberal patrons of poets and writers. The Chandellas also decorated their realm with tanks, forts, palaces and temples, which were mainly concentrated in their strongholds of Mahoba (ancient Mahotsava-nagara), Kalinjar (Kālañjara) and Ajaygarh (Jayapuradurga) and, to a lesser extent, in their towns of Dudhai, Chandpur, Madanpur and Deogarh in District Jhansi, of which the first three they themselves founded. But none of these places could compare in magnificence with the capital-town of Khajuraho (ancient Kharjjūravāhaka), which was adorned by the Chandellas with numerous tanks and scores of lofty temples, each vying with the other in sculptural grace and architectural splendour. According to local tradition, the place had originally eightyfive temples, but only twentyfive now stand in varying stages of preservation.

The earlier Chandella chiefs were local feudatories of the Imperial Pratīhāras, who had gained paramountcy in north India after the break up of Harshavardhana's empire. The first notable Chandella prince was Harsha, who reinstated, in *circa* A.D. 917, his Pratīhāra overlord Kshitipāla or Mahīpāla on the throne of Kanauj, shaken by the invasions of the Rāshṭrakūṭas. This achievement was probably commemorated by him by the construction of the Mātaṅgeśvara temple, which was the earliest sandstone temple to be constructed at Khajuraho. His son and successor, Yaśovarman, *alias* Lakshavarman, was even more powerful and valiantly defended his suzerain from the attacks of the Rāshṭrakūṭas and the Pālas alike. He won back, in *circa* 940, the fort of Kālañjara from the Rāshṭrakūṭas but grew so mighty as to defy his suzerains by retaining the fort for himself. According to a Khajuraho inscription of his son, dated 954, Yaśovarman built a magnificent temple of Vishṇu, identifiable with the Lakshmaṇa temple at Khajuraho, which was the most ornate and evolved temple of its age in central India, constituting a worthy monument of the augmented power and prestige of the Chandellas.

Yaśovarman was succeeded by his son Dhaṅga (*circa* 950-1002), who, during his long and eventful reign, boldly discarded the tutelage of the Pratīhāras, consolidated the Chandella kingdom by extensive conquests and made it the strongest power of north

[1] According to tradition a minor Parihār (Pratīhāra) family had its seat at Mau-Suhaniya, situated near Dhubela in District Chhatarpur.

India. His territories extended from Bhilsa to Gwalior and from Vārāṇasi to the Narmadā. He was great as a king and conqueror but was even greater as a patron of art and architecture. During his reign were built two of the finest surviving temples of Khajuraho, viz. the Viśvanātha and the Pārśvanātha, the former by the king himself in 1002 and the latter during his reign probably by one Pāhila, who was 'honoured by king Dhaṅga'. It is, however, not possible to identify a third temple, dedicated to Vaidyanātha (Śiva) and constructed by one Kokkala of the Grahapati family in 1001 during Dhaṅga's reign.

Dhaṅga's son and successor was Gaṇḍa, who enjoyed his paternal dominion without any diminution, though he had a short but peaceful reign (*circa* 1002-1017). The Vaishṇava temple, now known as Jagadambī, and the Sun temple, now called Chitragupta, both situated close to each other as constituents of the western group of royal temples at Khajuraho, may probably be attributed to this king.

Gaṇḍa was succeeded by his son Vidyādhara (*circa* 1017-29), who is referred to by Ibnu'l-Athīr, a Muslim chronicler, as Bīdā and described by him as the most powerful Indian ruler of his time. Under him the Chandella kingdom reached the zenith of its prosperity. Vidyādhara not only won victories over the Kalachuris and the Paramāras, the two contemporary rival powers in central India, but organized an active resistance against the foreign invader, Maḥmūd of Ghazna, and twice, in 1019 and 1022, encountered Maḥmūd when the latter invested the fort of Kālañjara, 'which has no equal in the whole country of Hindustan for strength and impregnability'. It stands to reason that Vidyādhara, who was the most powerful and prosperous Chandella potentate, should have continued the brilliant building-traditions of his predecessors, and the authorship of the Kandariyā-Mahādeva temple the largest and grandest temple of Khajuraho, may plausibly be attributed to him. Colour is lent to this suggestion by the fact that Vidyādhara is referred to in inscriptions as a great devotee of Śiva and by the find of a short epigraph on a *maṇḍapa*-pilaster of the Kandariyā temple, mentioning a king called Viriṁda, which may have been a pet name of Vidyādhara.

After the death of Vidyādhara, the Chandella power gradually declined owing largely to the determined onslaughts of the powerful Kalachuris and Muslim invaders. With the decline of the Chandella power, the importance of Khajuraho also waned, for the later Chandellas increasingly concentrated on the hill-forts of Mahoba, Ajaygarh and Kalinjar for strategic reasons. But the artistic momentum of Khajuraho was not lost abruptly, for temples continued to be built here till the twelfth century. The Kandariyā-Mahādeva temple was followed by a succession of smaller but almost equally artistic ones, such as the Vāmana, Ādinātha, Javārī and Chaturbhuja. The Śaiva temple of Dūlādeo was erected during the first half of the twelfth century, and the construction of yet another large Śaiva temple is recorded in a Khajuraho Museum inscription, which is palaeographically assignable to the close of the same century. Besides, images continued to be dedicated at Khajuraho till as late as 1158 in the reign of Madanavarman. That the later Chandella chiefs did not neglect Khajuraho is clear from Jayavarman's Khajuraho inscription of A.D 1117, which appears as a postscript to the Marakateśvara *praśasti* of king Dhaṅga, dated 1002. It is quite likely that the later Khajuraho temples referred to above were built under the patronage of the more influential among the royal successors of Vidyādhara, such as Vijayapāla, (*circa* 1029-51), Kīrttivarman (*circa* 1070-98) and Madanavarman (*circa* 1129-63). Further, the testimony of Ibn Baṭṭūṭa[1] reveals

[1] Ibn Baṭṭūṭa refers to Khajuraho as Kajarrā 'where there is a great pond, about a mile in length, near which are temples containing idols which the Muslims have mutilated. In the centre of that pond there are three cupolas of red stone each of three storeys; and at the four corners of

that the Khajuraho temples continued to shine in their glory till 1335. It is, therefore, clear that in spite of the loss of political importance, Khajuraho continued to be the religious capital of the Chandellas till their last days.

2. GENERAL CHARACTERISTICS OF THE TEMPLES

Except the Chausaṭh-yoginī, Brahmā and Lālguān-Mahādeva temples, which are constructed either wholly or largely of granite, all other temples of Khajuraho are built of a fine-grained variety of sandstone, of varying shades of buff, pink or pale yellow, brought from the quarries of Panna on the east bank of the Ken river. With the exceptions of the temples mentioned above and the Varāha and Mātaṅgeśvara ones, all temples of Khajuraho pertain to a cognate style and are manifestations of a distinctive and concerted architectural movement, differing only in details of expression. The temples belong to the Śaiva, Vaishṇava and Jaina sects, but in spite of divergent sectarian affiliations, the dominant architectural and sculptural schemes are uniformly homogeneous, so much so that, save for a few distinctive cult-images, there is nothing to distinguish a Vaishṇava temple from a Śaiva one and a Śaiva temple from a Jaina one.

The Khajuraho temples mark the culmination of the central Indian building-style and reveal certain distinctive peculiarities of plan and elevation. They are compact lofty temples without any enclosure-wall and are erected on a high platform-terrace (*jagatī*), which elevates the structure from its environs and provides an open promenade and ambulatory round the temple. All the compartments of the temple are interconnected internally as well as externally and are planned in one axis, running east-west and forming a compact unified structure of a size which is by no means very large. The essential elements of the plan, viz. *ardha-maṇḍapa*, *maṇḍapa*, *antarāla* and *garbha-gṛiha*, are present in all temples. In the larger temples, however, lateral transepts with balconied windows are added to the *maṇḍapa*, turning it into a *mahā-maṇḍapa*. While the *mahā-maṇḍapa* is a hypostyle hall of considerable height and size, closed except for the balconied windows on the lateral transepts, the *ardha-maṇḍapa* and the *maṇḍapa* are low hypostyle compartments, open on three sides and provided with a continuous stretch of balconied openings of the *kakshāsana*-design. The larger temples also introduce an inner ambulatory round the sanctum, to which is added another pair of lateral transepts and a rear transept, each with a balconied window for the ventilation of the interior. The inner ambulatory, where it exists, is connected with and approached from the *mahā-maṇḍapa* hall and constitutes, in a way, its extension around the sanctum. With two pairs of transepts cutting across the axis, the *sāndhāra* temples, therefore, resemble on plan a Latin cross with two principal arms, while the *nirandhāra* ones show only one cross-arm. Some of the larger temples also have a subsidiary shrine reared up in each of the four corners of the *jagatī*, rendering the structure a complete *pañchāyatana*.

Like the plan, the elevation of the temples also has distinctive features. The temple, erected on a lofty *jagatī*-terrace, has an emphatically high *adhishṭhāna* or basement-storey, consisting of a series of ornamental mouldings which slope out and grip the platform-terrace firmly, providing at the same time a fine relief for light and shade.

From p. 45

the pond are cupolas in which live a body of the jogis who have clotted their hair and let them grow so that they became as long as their bodies and on account of their practising asceticism their colour had become extremely yellow. Many Musalmans follow them in order to take lessons from them'. Mahdi Husain, *The Rehla of Ibn Baṭṭuṭa* (*India, Maldive Islands and Ceylon*), Gaekwad's Oriental Series, CXXII (Baroda, 1953), p. 166.

Over this stable and ornate base rests the *jaṅghā* or the wall-portion of the temple, forming the central zone, which consists of solid walls alternating with voids of the inner compartments. The balconied windows, canopied by overhanging eaves, admit light and air into the interior and form beautiful openings for the inner compartments. The solid wall-spaces in between them are studded with two or more horizontal bands of statuary of exquisite grace and charm, which constitute the most attractive feature of the Khajuraho temples. The deep shadows, cast over the whole composition by the beautiful balconied windows, and the light and shade over the sculptural bands, following the alternate projections and recesses of the indented plan, indeed produce a highly picturesque effect.

Above the central zone of the wall proper rises the roof consisting of a series of graded peaks that veritably resemble a mountain-range (*Kailāsa* or *Meru*), to which an Indian temple is frequently likened. The several compartments have their individual roofs which rise in a modulated *crescendo*, from the lowest over the *ardha-maṇḍapa* to the loftiest over the sanctum. These peaks, arrayed along the axial line, rise and fall alternately, while maintaining their overall upward ascent, and culminate in the tallest *śikhara*, which is raised directly over the sanctum. Unlike the superstructures of the *ardha-maṇḍapa*, *maṇḍapa* and *mahā-maṇḍapa*, each of which is of a pyramidal shape, the *śikhara* over the sanctum is tall and curvilinear in design, with an uninterrupted lyrical outline. The developed temples are characterized by an intricate arrangement of subsidiary *śikharas* of varying sizes, attached to the main *śikhara* at different heights. The clustering together of subsidiary peaks to the main one not only lightens the weight of the stupendous pile but also accentuates the soaring effect and intensifies the vertical accent of the main *śikhara*. The seemingly restless upward movement of the volumes and masses of the entire composition and the progressive ascent and descent of the superstructures converging to the highest pinnacle lend a peculiar vertical quality and rhythm to the Khajuraho temples.

In all the well-preserved temples of the developed type, the *rathas* of the *śikhara* extend upwards beyond the *grīvā* or neck-course, which is crowned respectively by a large *āmalaka*, a series of *chandrikās*, a smaller *āmalaka*, a *kalaśa* and a *vījapūraka*. The extension of the *rathas* beyond the *grīvā* and the occurrence of two *āmalakas*, one large and the other small, on the pinnacle of the *śikhara* constitute the peculiarities of the central Indian style of temples, prominently exhibited by the Khajuraho monuments.

To turn to the interior plan. The *ardha-maṇḍapa* or the entrance-porch is entered through a highly ornate *makara-toraṇa*,[1] which is profusely carved with minute figures resembling a hanging tracery. The *ardha-maṇḍapa* is a modest oblong passage which broadens into a slightly wider compartment or *maṇḍapa* in the case of the larger temples. The *ardha-maṇḍapa* and *maṇḍapa*, which lead into the *mahā-maṇḍapa*, are open on three sides and are enclosed by sloping balustrades (*kakshāsana*). Their roof is carried on dwarf-pillars and -pilasters resting on the *āsana-paṭṭa* of the *kakshāsana*. The *mahā-maṇḍapa* is a closed hall with lateral transepts which are provided with balconied windows. In the larger temples, the *mahā-maṇḍapa* shows in the centre four tall pillars carrying a square framework of architraves, which is upwards first turned into an octagon and then into a circle supporting a ceiling of overlapping concentric courses. The *mahā-maṇḍapa* is connected with the *garbha-gṛiha* through the *antarāla* or vestibule. The ornate doorway

[1] The *makara-toraṇa* is preserved only in three temples, viz. the Lakshmaṇa, Kandariyā-Mahādeva and Javārī.

of the sanctum is entered through one or more *chandra-śilās* (moon-stones) placed on the floor of the *antarāla*.

With such a simple and functionally effective plan, the interior shows an amazing exuberance of decorative details and sculptural wealth, largely found on the doorway, pillars, architraves and ceilings. The cusped and coffered ceilings, representing intricate geometrical and floral designs, the latter frequently showing prominent staminal tubes, exhibit an uncommon skill and ingenuity. These designs consist of *kola* and *gajatālu* courses, based essentially on the patterns of shell-cusps with ribs and intersecting circles. Even more remarkable than the ornate ceilings are the bracket-figures of *apsarases* and *śālabhañjikās*, tenoned into the *bhūta*-brackets or the ceiling-corners, which, with their sensuous modelling, charming postures and exquisite finish, constitute masterpieces of medieval sculpture. In the case of the *sāndhāra* temples, the façades of the sanctum also show two or three bands of statuary over a moulded *adhishṭhāna*, repeating on a smaller scale the sculptural theme and decorative ornaments on the exterior shell.

Like the exterior, the design of the interior apartments also emphasizes the vertical aspiration. Imposing flights of steps lead from the ground to the *jagatī*-terrace and from there to the *ardha-maṇḍapa*, and thence to the *mahā-maṇḍapa* and *antarāla*, which have successively higher floors. The *garbha-gṛiha*, which is at the highest level, is approached from the *antarāla* through a stepped series of *chandra-śilās*.

The Khajuraho temple has pronouncedly individual features. The sanctum is *sapta-ratha* on plan and in elevation, and the cubical portion below the *śikhara* is divided into seven segments (*saptāṅga-bāḍa*) showing two series of mouldings of the *adhishṭhāna* and three sculptured registers on the *jaṅghā*, separated by two sets of *bāndhanā*-mouldings. The principal lineaments of the elevation directly rise from and basically conform to those of the plan. The numerous projections and recesses of the elevation, following rhythmically the indentations of the plan, produce an admirable contrast of light and shade, and all of them converge to the final unity of the *śikhara*, thus intensifying the plasticity and vertical aspiration of the monument. Rhythmic accentuation is the keynote of the Khajuraho temple, and this is further characterized by a harmonious integration of sculpture with architecture. With an enormous array of lovely sculptured forms ever present, the texture of the Khajuraho temple vibrates with a rare exuberance of human warmth, which is unparalleled in any other art.

The Khajuraho temple is unique in showing a *sapta-ratha* sanctum with a *saptāṅga-bāḍa*, which marks the highest development of Indian architectural design. The medieval temple of Orissa generally has a *pañcha-ratha* sanctum with a *pañchāṅga-bāḍa* and that of Rajasthan, Gujarat and Kathiawad a *pañcha-ratha* sanctum with normally a *tryaṅga-bāḍa* and only rarely a *pañchāṅga-bāḍa*. The plan, design and composition of the Orissan temple are considerably different from those of the Khajuraho one. In Orissa, the *śikhara* over the sanctum is unencumbered by subsidiary towers and shows a characteristic vertical outline with a pronounced curve only near the top, while the *maṇḍapa* is an astylar structure with a severely plain and gloomy interior, in contrast to the well-lighted hypostyle hall of Khajuraho. The four principal apartments of the developed Orissan temple, viz. sanctum, *maṇḍapa* and the two separate ancillary halls, respectively known as *rekha-deul*, *jagamohana*, *nāṭa-maṇḍapa* and *bhoga-maṇḍapa*, are disposed axially and combinedly become inordinately long and inorganic, in glaring contrast to the compact and integrated complex of Khajuraho.

Nearer home, the Pratīhāra temple of central India has a simple and relatively-stunted *śikhara*, a low *adhishṭhāna* and an unpretentious plan generally consisting of only the sanctum and *antarāla*, which, in a few cases, is preceded by the *ardha-maṇḍapa*. Rarely



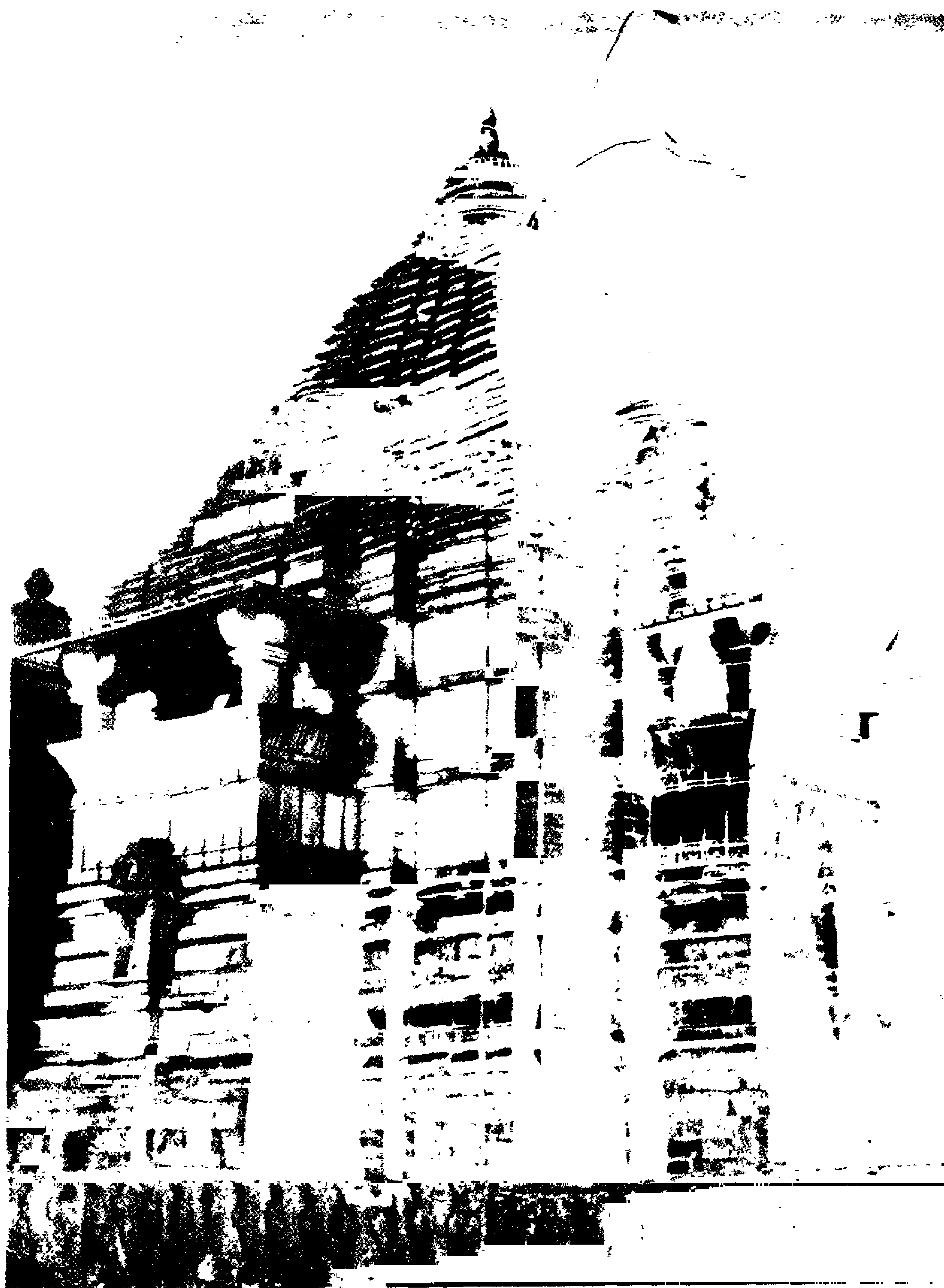
General view of Lakshmana and neighbouring temples. *See p. 13*

PLATE XXII



Brahmā temple. *See p. 51*

To face pl. XXIII



Mātaṅgeśvara temple. See p. 52

Faces pl. XXII



Lakshmaṇa temple. See p. 53

is a pillared *maṇḍapa* added in front of the *antarāla* (as in the Gadarmal temple at Badoh), and there is only one example of a *sāndhāra* temple, the Mālādevī temple at Gyāraspur, showing a *mahā-maṇḍapa* with undeveloped transepts. The *jaṅghā* is decorated with a single band of sculptured niches crowned by a tall *udgama* or pediment of *chaitya*-arches. It is essentially a *pañcha-ratha* temple with a *tryaṅga-bāḍa* and has not much in common with the developed architecture of Khajuraho.

The Gujarat temples are analogous to the Khajuraho ones in the division of the elevation into the moulded *adhishṭhāna*, sculptured *jaṅghā* and *śikhara*, clustered round with *aṅga-śikharas* and in the general plan and composition of the sanctum and the *maṇḍapa* (called *gūḍha-maṇḍapa*). But in Gujarat the pillars of the *maṇḍapas* are more ornate and their ceilings are larger and more elaborately decorated with eight to sixteen bracket-figures and with an enormous central pendant, called *padma-śilā*. The developed Gujarat temple shows an independent peristylar hall, known as *sabhā-maṇḍapa*, which is placed axially in front of the *gūḍha-maṇḍapa*, and has a similar ornate ceiling and pillars, which are further embellished with festooned *toraṇa*-arches of very highly-complicated patterns.

While the later Rajasthan temples are stylistically akin to the Gujarat ones, the earlier ones resemble those of Khajuraho more closely than the monuments of any other region. The early *sāndhāra* temples of Rajasthan bear the closest affinity to the Khajuraho ones in the plan and composition of the interior and the exterior, with the typical balconied transepts and openings, and in the design of the interior compartments including their ornate ceiling and doorways. The interior pillars of the Rajasthan examples, however, are generally more ornate, while their *jaṅghā*-façade is embellished with a solitary row of sculptured niches, crowned by long *udgamas*, which are common features of the Pratīhāra style of central India as well as of Rajasthan. With the absence of the *apsaras*-brackets in the interior and with the *dik-pāla* figures normally depicted with only two arms on the exterior, the sculptural ornamentation in Rajasthan is more sober and restrained, and one misses there the plastic grace and exuberance which is so characteristic of Khajuraho. Nevertheless, the essential identity of architectural plan and design and the similarities in ornamental scheme and even plastic style are so strong as to suggest that the early *sāndhāra* temples of Rajasthan were the precursors of the Lakshmaṇa temple at Khajuraho.

3. CHRONOLOGY

It has hitherto been thought that all the Khajuraho temples were built within a hundred years, from *circa* 950 to 1050,[1] but a closer scrutiny reveals that the earliest temple cannot be much later than 850 and the latest may go beyond 1100. There is no doubt that there was an older tradition of architecture in granite at Khajuraho and the transition from granite to sandstone must have been accomplished gradually. Further, on a comparative study of the significant details of architectural designs, the style and modelling of the sculptures and the development of the decorative motifs and ornaments on the Khajuraho temples, together with available inscriptional evidence, the temples

[1] Recently S. K. Saraswati has re-examined the question and concluded that 'none of the temples at Khajuraho, even those which on account of style may be regarded as the earliest, can be dated prior to the second half of the eleventh century A.D.', *The Struggle for Empire* (Bombay, 1957), pp. 557-76. The present author, however, does not agree with this for reasons to be discussed in detail elsewhere.

resolve themselves into two broad groups, viz. (1) the earlier, consisting of the Chausaṭh-yoginī, Lālguān-Mahādeva, Brahmā, Mātaṅgeśvara and Varāha, and (2) the later, comprising the rest.

Except the Chausaṭh-yoginī, which has an exceptional purpose and plan and is made entirely of granite, the temples of the earlier group are normally built partly of granite and partly of sandstone and are small structures, each consisting of a square sanctum, roofed by a pyramidal superstructure of receding tiers of *pīḍhas*, a very constricted *antarāla* and an *ardha-maṇḍapa* of one *chatushkī* consisting of two pillars and two pilasters. The *antarāla* and *ardha-maṇḍapa* have survived only in the Mātaṅgeśvara, which is the largest and perhaps the latest example of its group and is constructed of sandstone. The Varāha shrine, which is a pavilion built of sandstone, also belongs to the same conception. Although this group is characterized by a plain interior and exterior and an austerity of design and ornamentation, some of the basic traits of the Khajuraho style, viz. the inclusion of two *āmalakas* among the crowning ornaments of the superstructure, the division of the *jaṅghā* into two or three horizontal registers and the accentuation and concordance of the main lineaments of the plan and the elevation, are already conspicuously present here and distinguish this group from the Kuṭakeśvara temple at Pathari, its Pratīhāra congener.

The later group includes all the other temples of Khajuraho, which are constructed of sandstone in entirety and are distinguished by a developed plan and design and lavish ornamentation, already noted above.

On a comparative analysis of the sculptural, architectural and decorative features of the temples of the later group, it is found that the Lakshmaṇa and Dūlādeo are endowed with pronounced individual features of a marked diversity, representing the two extremes of the same movement. Thus, while the plastic modelling of the Lakshmaṇa is sensitive and massive, that of the Dūlādeo is stereotyped, crusty and angular, often showing very shallow relief. While the *śikhara* of the Lakshmaṇa has a single row of *uraḥ-śṛiṅgas* and two rows of *karṇa-śṛiṅgas*, that of the Dūlādeo is clustered by three rows both of *uraḥ-śṛiṅgas* and *karṇa-śṛiṅgas*. Again, the individual *chaitya*-arches forming the lattice-ornament of the *śikhara* are bold, distinct and of a pristine form on the Lakshmaṇa, while those on the Dūlādeo are confused and complicated. The Lakshmaṇa, therefore, stands at the beginning of the finer and later series of the Khajuraho temples and the Dūlādeo at its fag end. In between are to be placed the other temples. In fact, the typical Khajuraho style begins with the Lakshmaṇa, which is followed by the Pārśvanātha, Viśvanātha, Jagadambī and Chitragupta, marking the successive stages in the evolution of the architectural and sculptural efflorescence at Khajuraho. The peak is reached in the Kandariyā-Mahādeva, which represents the grand finale and culmination of the architectural movement. The temples which followed the Kandariyā, viz. the Vāmana, Ādinātha and Javārī, keep up the sculptural excellence of the style but are much less ambitious projects. The Chaturbhuja, which closely follows the Javārī, continues the same sculptural and architectural traditions, but the signs of decline are already evident. The Dūlādeo marks the last glow of the dying lamp, as it combines highly dynamic and vigorous sculptures with degenerate, stereotyped and lavishly-ornamented figures and art-motifs.

It is thus seen that the Chandella temple-style went through the stages of infancy, adolescence, maturity and decline, of which a complete record of evidence is available at Khajuraho. The story of this evolution is traceable through the progressive change in the theme and modelling of sculptures and in the development of architectural design and decorative motifs. The earlier group, illustrated by the Lālguān-Mahādeva and

Brahmā temples, marks its infancy; the Lakshmaṇa temple, in which developed forms emerge into view, represents its adolescence; its maturity is reached in the Kandariyā-Mahādeva; and the Chaturbhuja and Dūlādeo mark its nadir.

In the following paragraphs is given a chronological narrative of the Khajuraho temples from the earliest to the latest, briefly touching on the salient features of each. The proposed chronology, largely based on the building-material and sculptural and architectural styles, is tentative and does not claim finality, as there are no definite checks and the available inscriptional data are neither copious nor precise.

4. THE TEMPLES

A. Chausaṭh-yoginī

The Chausaṭh-yoginī temple is the earliest building at Khajuraho, forming, as it were, the substructure over which the grand edifice of the local style was reared up. We cannot state definitely whether its crude and primitive architecture was due to the use of poor building-material, i.e. the local coarse-grained granite, or indifferent craftsmanship, or a deliberate design dictated by some social, traditional or ritualistic compulsion, or a combination of two or more of these factors. The temple has an exceptional plan and design. Standing on a lofty *jagatī*, it is an open-air quadrangular structure of sixtyseven peripheral shrines, of which the one in the back wall, facing the entrance, is the largest and constitutes the main sanctum. The shrines are tiny cells, each entered by a small doorway, and are severely plain and roofed by a curvilinear *śikhara* of an elementary form. A few simple mouldings on the façade are all the decoration that the temple displays, but in spite of its uncouth appearance and rugged bareness, it possesses an elemental strength and reveals some basic traits of the Khajuraho style, such as a lofty *jagatī* and a *jaṅghā* divided into two registers. Of all the *yoginī* temples in India, this is the most primitive in construction and is unique in being quadrangular and not circular on plan. The three surviving images are massive and squat in form, forming the oldest sculptures of Khajuraho. The cumulative evidence of the sculptural and architectural styles, coupled with the early palaeography of the short labels on the images, indicates that the temple is probably datable to the last quarter of the ninth century.

Similar primitive shrines, likewise disposed in a row and made largely of granite, have been found at sites like Mau-Suhaniya, Kainri and Chamarua, all situated in Chhatarpur District. They appear to pertain to the provincial style of Pratīhāra architecture.

B. Brahmā and Lālguān-Mahādeva (pl. XXII)

Next come the Brahmā and Lālguān-Mahādeva temples, the former originally dedicated to Vishṇu and the latter to Śiva, both with a simple plan and design and with the *śikhara* made of sandstone and the body of granite. They are small structures with very simple *adhishṭhāna*-mouldings, resembling those of the Chausaṭh-yoginī. Although they differ on plan, their elevation is similar, as they show a plain *jaṅghā* of two registers surmounted by a pyramidal roof of receding tiers of *pīḍhas*. The Brahmā temple is cruciform externally with projections on each side, and square internally, resting on twelve plain pilasters of granite. The projection on the east contains the

entrance and that on the west is pierced with a smaller doorway, while the lateral projections on the other two sides contain plain latticed windows. Except for the boldly-modelled figures of the Brāhmaṇical Trinity on the lintel and of Gaṅgā and Yamunā flanked by a single attendant at the base, its doorway is plain. On the other hand, the doorway of the Lālguān-Mahādeva is absolutely bare and devoid of all carvings except a diamond on the doorsill. While the Brahmā shows a well-preserved *śikhara* complete with crowning members, of which the bell constitutes the lowest and most conspicuous element, the other has completely lost a major part of its *śikhara* including its crowning ornaments. Despite some difference in details, the two temples belong to the same conception, sharing a common plan, design and ornaments, and cannot but be contemporary with each other. As they belong to the transitional phase, when sandstone was introduced but granite had not ceased to be used as building-material, they are later than the Chausaṭh-yoginī temple but are earlier than the earliest structures built entirely of sandstone at Khajuraho. These temples are, therefore, datable to *circa* 900.

C. Mātaṅgeśvara (pl. XXIII)

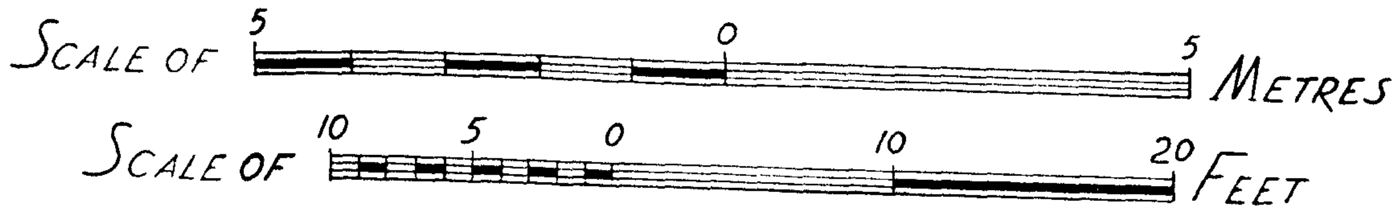
The Mātaṅgeśvara temple is the plainest and earliest among the sandstone temples of Khajuraho. On plan and in design, it is a grand elaboration of the Brahmā temple, with this notable difference that the *bhadra*-projections on the three sides are marked by balconied windows of the *kakshāsana*-pattern, canopied by projecting eaves, which are so characteristic of the developed Khajuraho temples. Each such projection also shows a prominent niche, which is another distinguishing feature of the local temple-style. While retaining its family-likeness to the Brahmā temple in general design and appearance, this temple anticipates the decorative features and compositional arrangement of the *maṇḍapa*-roofs of the developed Khajuraho temples. Its pillars, however, continue to be stumpy and austere, carrying neither *bhūta*-brackets nor any sculptures. The ceiling shows elementary ornaments of cusps (*kola* courses) and floral cusps (*gajatālu* courses) without any attempt at elegance or elaboration. Since both its exterior and interior are almost plain and devoid of that exuberant sculptured and carved ornamentation, which came to be a hallmark of the developed Khajuraho style, there is no doubt that this is one of the earliest sandstone temples of Khajuraho and is not far in date from the Brahmā. As the latter has been assigned to *circa* 900, the Mātaṅgeśvara may be dated to *circa* 900-25.

The stupendous size of the enshrined *liṅga* (8 ft. 4 in. high and 3 ft. 8 in. in diameter), coupled with the substantial proportion of the temple, constituting the grandest specimen of this distinctive temple-type, may suggest that it was perhaps set up by one of the early Chandella kings, and that king may be identified with Harsha, the father and predecessor of Yaśovarman, who is recorded to have built the Lakshmaṇa temple (below, p. 53).

D. Varāha

The Varāha shrine, which is a mere *maṇḍapa*, is essentially similar on plan and in design to the Brahmā and Lālguān-Mahādeva, but is more modest in size and simpler in construction. It is an oblong pavilion with a pyramidal roof, resting on twelve plain pillars, and enshrines a monolithic colossal (8 ft. 9 in. long and 5 ft. 10 in. high) image of Varāha, which is exquisitely finished to a glossy lustre and is carved all over with multiple figures of gods and goddesses. Since the shrine is built entirely of sandstone, it is

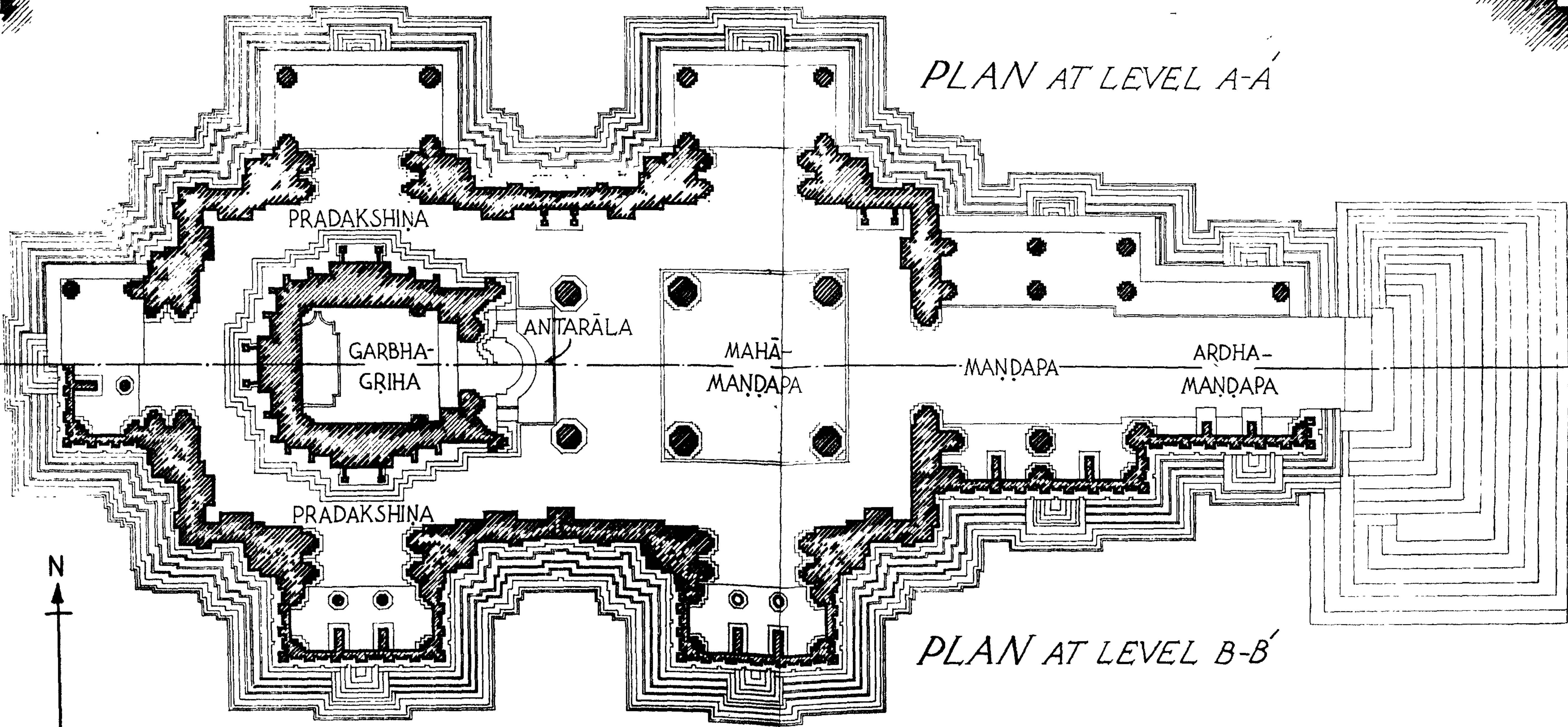
LAKSHMAṆA TEMPLE
KHAJURĀHO



A — A'

B — B'

LONGITUDINAL SECTION



obviously later than the Brahmā and Lālguān-Mahādeva temples, which belong to the phase of transition between granite and sandstone. This shrine is also assignable to the same date as proposed for the Mātaṅgeśvara temple, viz. *circa* 900-25.

E. Lakshmaṇa (pl. XXIV—XXVI)

On grounds of sculptural and architectural styles the Lakshmaṇa temple is easily the earliest among the finer sandstone temples of Khajuraho. The roofs of the *mahā-maṇḍapa*, *maṇḍapa* and *ardha-maṇḍapa* each show a pure pyramidal *śikhara* without any subsidiary *śikharas* and with a straight contour, which is crowned by a prominent bell-member. The only other temple at Khajuraho thus crowned is the Brahmā, which decidedly belongs to the earlier group of temples having pyramidal *śikharas* of a similar outline. It may be noted that with the exception of the Lakshmaṇa, the temples of the later group, as a rule, have complex *maṇḍapa* roofs with a domical outline. The *maṇḍapa* roofs of the Lakshmaṇa also exhibit the following peculiarities :—(1) the *pīḍhas* of its *maṇḍapa* and *mahā-maṇḍapa* roofs show tile-ribbings; (2) the terminal ends of the *pīḍhas* of the *mahā-maṇḍapa* roof are decorated with miniature figures of *nāgas* in *añjali*; and (3) the *mahā-maṇḍapa* roof is crowned by a *kalaśa* with drooping foliage, representing *ghaṭa-pallava*—an early feature.

The greater relief of scrollwork on some pillars of the Lakshmaṇa temple and the sinuous grace and voluminous modelling of its sculptures, coupled with the serenity of their expression, are reminiscent of Gupta tradition. This is the only temple which shows a simple *makara-toraṇa* of two loops, flanked by a pair of large spirited figures of gladiators forcing open the mouth of each *makara*, while the remaining temples which have preserved the ornamental *toraṇa* (viz. the Javārī and Kandariyā-Mahādeva) have *makara-toraṇas* of four loops without the flanking figures. This is notable among the Khajuraho temples in representing some *dik-pāla* figures with two arms and in decorating the surround of the doorway with an elaborate pattern of lotus-leaves in relief, which are features of early medieval temples. Only two temples at Khajuraho, viz. the Lakshmaṇa and Pārśvanātha, display on the doorway-lintel two bold sculptured friezes, of which one represents the *nava-grahas* with a large figure of Rāhu. Further proofs of its early date are provided by the *pañcha-ratha* design of its sanctum and the simple pristine form of the *chaitya-gavākshas* or *kūḍus* forming the lattice-pattern on its *śikhara*, where the individual *kūḍus* can be clearly recognized and the pattern is neither minute nor complicated. But a surer indication of its early date is furnished by the decoration of the façades with long *udgamas* or pediments of *chaitya*-arches which are characteristic of such early medieval temples as the Chaturmukha-Mahādeva at Nachna (above, p. 43), Telī-kā-Mandir at Gwalior, Gadarmal at Badoh, Mālādevī at Gyaraspur and Kālikā-mātā at Chitorgarh. Fortunately, from an inscribed slab, dated in Vikrama year 1011 (A.D. 953-54), which was originally found in the débris accumulated at the base of this temple and which is fixed in its *maṇḍapa* passage, we learn that the temple was constructed by the Chandella king Yaśovarman, who died in *circa* 954. The Lakshmaṇa temple, therefore, appears to have been built between 930 and 950, which fits in well with its architectural and sculptural peculiarities.

This Vaishṇava temple is a *sāndhāra-prāsāda* of the *pañchāyatana* variety and is the earliest and best-preserved of the evolved temples of Khajuraho—the only one which preserves intact the subsidiary shrines and the *jagatī* with its mouldings and friezes, the latter showing a moving pageant of hunting- and battle-scences, processions of elephants, horses and soldiers and miscellaneous representations, including domestic and erotic

scenes. This temple still displays the largest number of *apsaras* brackets, which form a notable feature of the interior decoration of the Khajuraho temples.

With the moving pageant of processional friezes carved on its *jagatī* and *adhishṭhāna*, its well-finished and ornate *makara-toraṇa* and ceilings, its *jaṅghā* decorated with two bold bands of graceful sculptures and spirited *śārdūlas*, and enchanting *apsarases* represented on the interior brackets, this temple ushers in the typical architectural style of Khajuraho and has yielded some of the masterpieces of medieval art, including the three well-known sculptures in the Indian Museum—woman with the child, woman writing letter and woman looking into a mirror—which were erroneously believed to have come from Bhubaneswar but which, from identity of style, material, dimensions and inscribed graffiti, may now definitely be ascribed to the Lakshmaṇa temple at Khajuraho.

F. Pārśvanātha (pls. XXVII and XXVIII)

On the basis of sculptural, architectural and inscriptional evidence the Pārśvanātha temple appears to have been a close successor of the Lakshmaṇa. While the Lakshmaṇa was built by king Yaśovarman (above, p. 53), the Pārśvanātha was probably built during the reign of his son and successor Dhaṅga. The two relevant inscriptions, the sources of this information, however, were both engraved in the reign of king Dhaṅga and bear the same date, viz. Vikrama year 1011 (A.D. 953-54). From the marked palaeographical difference between the two inscriptions Kielhorn rightly concluded that the inscription on the Pārśvanātha temple was a re-engraved copy of a lost original record.[1] The developed Nāgarī script of this inscription leaves little doubt that it was re-engraved after the lapse of more than a century. The same temple, however, has numerous earlier pilgrim-records, which roughly date from the time of the construction of the temple and which are plausibly assignable to *circa* A.D. 950-1000 on grounds of palaeography.

The inscriptional evidence is supported by numerous affinities of architectural and sculptural styles of the Pārśvanātha, which may be enumerated as follows.

(1) The Pārśvanātha resembles the Lakshmaṇa in showing a frieze of projecting elephants on the *adhishṭhāna*-mouldings of the *ardha-maṇḍapa*. In fact, the only other local temple to display such a frieze is the Nandī shrine attached to the Viśvanātha temple, which immediately follows this temple in date (below, p. 55).

(2) The doorways of the Lakshmaṇa and Pārśvanātha are strikingly similar inasmuch as the sculptures of the river-goddesses are bold and the *nāga*-figures are absent below the relief-scrolls resembling *nāga*-coils on the surround of the doorway.

(3) A frieze of heart-shaped flowers on the basement is peculiar to the Lakshmaṇa, Pārśvanātha and Ghaṇṭai.

(4) Short *udgamas* or pediments of *chaitya*-arches in place of figures on the upper row of the outer *jaṅghā* are confined to the subsidiary shrines of the Lakshmaṇa and Pārśvanātha temples.

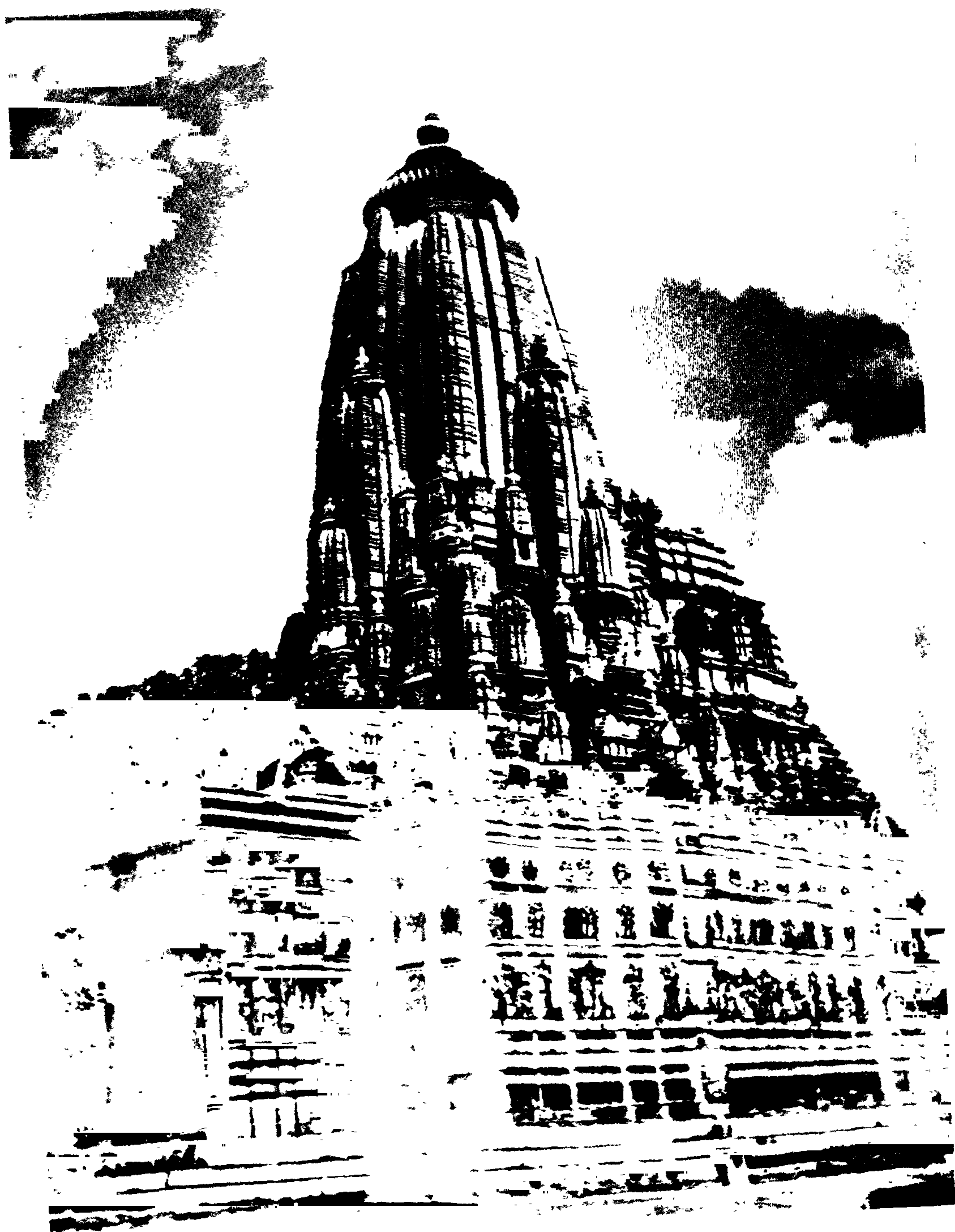
(5) Despite its Jaina dedication, the Pārśvanātha bears a significant kinship to the Lakshmaṇa in displaying among its sculptures a predominance of Vaishṇava themes, which include such uncommon representations as *śaṅkha-purusha*, Paraśurāma, Balarāma with Revatī and a group of Rāma, Sītā and Hanumān, in addition to diverse forms of Vishṇu. Besides the Lakshmaṇa, this is the only temple at Khajuraho which depicts

[1]*Epigraphia Indica*, I (1892), pp. 135-36.



Lakshmana temple, ceiling of ardha-mandapa. *See p. 53*

PLATE XXVII



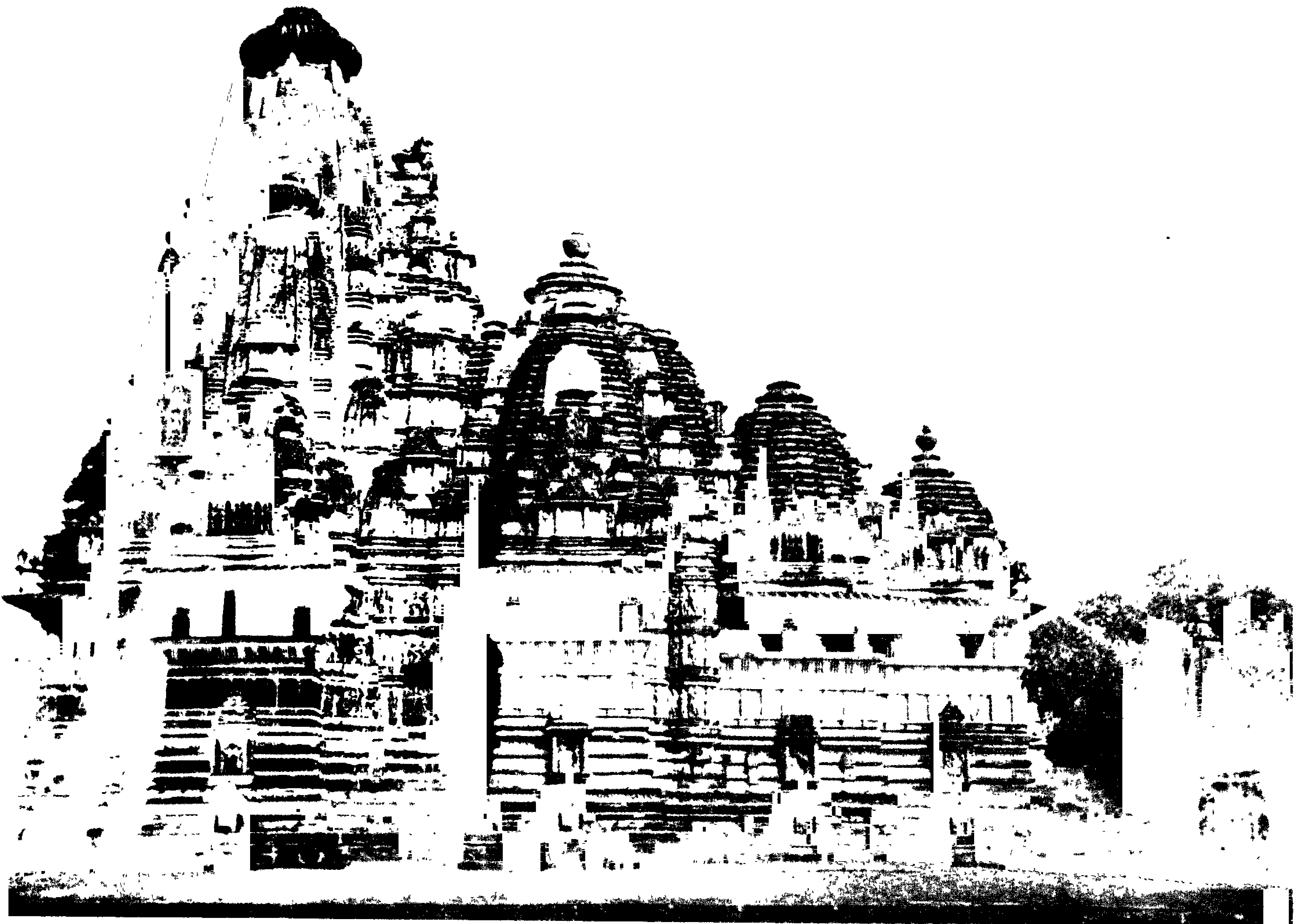
Pārśvanātha temple. *See p. 54*

To face pl. XXVIII



Pārśvanātha temple, sculptures on part of south façade. See p. 7[illegible]

To face pl. XXVII



Viśvanātha temple. *See p. 55*

scences from the *Kṛishṇa-līlā*. In fact, the representations of the *Kṛishṇāyana*-episode of *Yamalārjuna* on the two temples (pl. XXXIX A) are so alike as to suggest an identical authorship.

(6) The type of the *apsaras* with broad hips represented as facing front with the legs placed across each other is peculiar to these two temples.

(7) Lastly, the sculptures of this temple approximate those of the Lakshmaṇa in voluminous modelling and general treatment, including the style of head-dress, though some figures here show a better proportion and poise, anticipating the most elegant and proportionate figures of the Viśvanātha temple.

Thus, the affinity in sculptural style and theme between the Pārśvanātha and Lakshmaṇa temples definitely indicates their chronological propinquity. Architecturally, however, the Pārśvanātha shows some advance over the Lakshmaṇa temple in the form and design of the *śikhara*. Unlike the Lakshmaṇa, which has only one row of *uraḥ-śṛiṅgas* and two rows of *karṇa-śṛiṅgas*, this temple shows two rows of the former and three rows of the latter. Further, while the Lakshmaṇa is girdled round by two rows of sculptural bands, this temple carries three rows of them, the top row showing figures of flying *vidyādharas* and their couples. The *vidyādhara* figures represented in a slightly-modified form in the top row constitute a characteristic of the later temples of Khajuraho and first make their appearance on the Pārśvanātha. Being similar to the Lakshmaṇa generally, but slightly more advanced in a few details, the Pārśvanātha temple should be a close successor to the Lakshmaṇa in the date of construction. If the Lakshmaṇa is datable to *circa* 930-50 during the later part of Yaśovarman's reign, the Pārśvanātha may be attributed to *circa* 950-70 during the early part of Dhaṅga's reign.

The Pārśvanātha temple is distinguished by a few individual features of design and composition. It is oblong on plan with an axial projection on the two shorter sides, that on the east or front constituting the *ardha-maṇḍapa*, while that on the west consists of a shrine attached to the back of the sanctum. Although it is a *sāndhāra-prāsāda*, the transepts with the balconied windows, which are so characteristic of the developed Khajuraho style, are conspicuous here by absence. The *jaṅghā* or the wall is solid and monotonously embellished with three bands of graceful sculptures with no voids at all to relieve the monotony.

G. Viśvanātha (pl. XXIX)

This Śaiva temple enshrining a *liṅga*, is a *sāndhāra-prāsāda* of the *pañchāyatana* variety and is among the finest examples of the developed Khajuraho style. Architecturally, it comes midway between the Lakshmaṇa and the Kandariyā, and its importance lies in the fact that it anticipates the Kandariyā, which marks the culmination of the central Indian building-style. Thus, the basement-mouldings of this temple closely resemble those of the Kandariyā, with this difference that the latter shows a few additional mouldings in the lower one-third. The two temples also agree in the general arrangement and disposition of sculptures. Three sculptural bands of equal size on the façades of the *jaṅghā* are peculiar to these two temples at Khajuraho: they exhibit a striking identity of sculptural theme inasmuch as the nine principal niches of their basement-façades represent images of dancing *sapta-mātṛikās* with Gaṇeśa on one end and Pārvatī or Vīrabhadra on the other. Even the *śikharas* of the two temples are essentially similar in design, though that of Viśvanātha is appreciably simpler, showing only one *uraḥ-śṛiṅga* and two rows of *karṇa-śṛiṅgas* on each side. From the foregoing it is clear that the Viśvanātha is the precursor, in plan, design and ornamentation of the Kandariyā.

Of the two inscriptions now built into the *maṇḍapa*-walls of the temple, the longer one was found in this temple and belongs to it. It is a long royal record which refers to the dedication of two *liṅgas*, one made of emerald and the other of stone, in a towering temple of Śiva-Marakateśvara, built by the Chandella king Dhaṅga in the Vikrama year 1059 (A.D. 1002). Although the stone *liṅga* alone has survived there is no doubt that the inscription refers to the Viśvanātha temple itself, which, by its architectural grandeur and sculptural grace and exuberance, easily impresses as a monument worthy of a king.

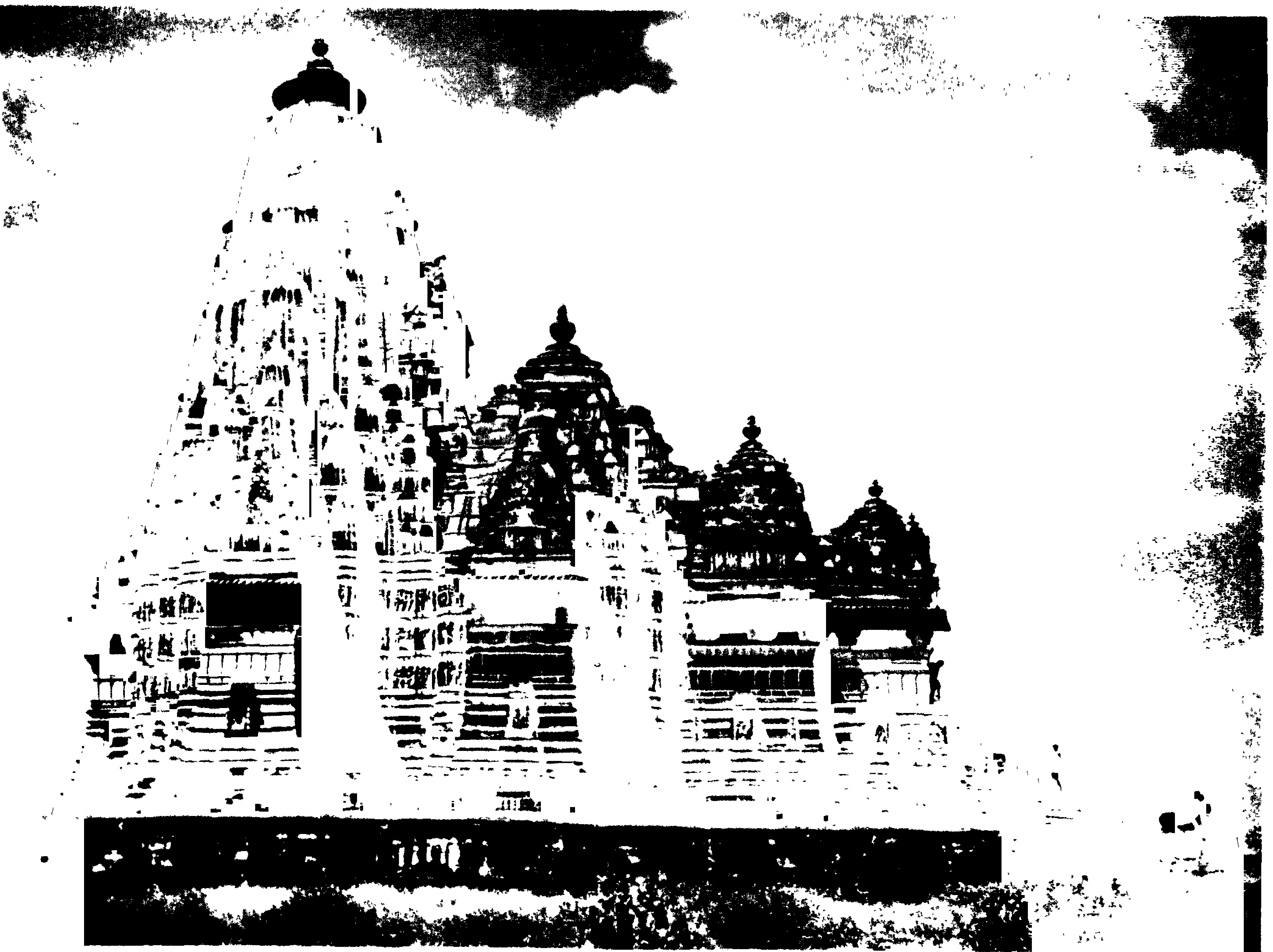
H. Jagadambī and Chitragupta

The Jagadambī and the Chitragupta temples, originally dedicated respectively to Vishṇu and Sūrya, mutually resemble in respect of plan, design, general conception, dimensions and decorative scheme. They are, therefore, quite close to each other in time as they are in space. Each is a *nirandhāra-prāsāda* and consists of a sanctum, *antarāla*, *mahā-maṇḍapa* with lateral transepts and an *ardha-maṇḍapa*. The *adhishṭhāna*-mouldings of the Jagadambī are simpler and are devoid of the processional frieze, which is a conspicuous feature of the Chitragupta. Again, unlike the Chitragupta, which has six pairs of *dvāra-pālas* disposed all round the *mahā-maṇḍapa* interior, the Jagadambī has only three, two in the east and one in the west of the *mahā-maṇḍapa*, but none in the lateral directions. The square ceiling of the *mahā-maṇḍapa* hall of the Jagadambī is much simpler than the octagonal ceiling of the Chitragupta, which thus appears to be relatively more ornate and evolved and therefore slightly later in date. The total absence of Nandīśvara figures on the Jagadambī, as on the Pārśvanātha, is also a pointer to its relative antiquity.

The sculptures on these temples approximate those of the Viśvanātha in style and proportion and are not as slender as on the Kandariyā. The same affinity is visible with regard to the architectural and decorative motifs, including the form of the *chaitya*-arches on the lattice-ornament of the *śikhara*. The Jagadambī and the Chitragupta temples are, therefore, to be placed stylistically between the Viśvanātha and the Kandariyā and are assignable to *circa* 1000-25.

I. Kandariyā-Mahādeva (pls. XXX-XXXIII)

This is the largest and the loftiest temple of Khajuraho, measuring about 100 ft. each in length and height and 66 ft. in width, excluding the *jagatī*. Strikingly similar to the Viśvanātha, it is much more magnificent, and its mature plan and design, its grand dimensions and symmetrical proportions, its superb sculptural embellishment and architectural elaboration—all mark it out as the most evolved and finished achievement of the central Indian building-style and one of the sublimest creations of Indian architecture. Decorated with graded and ascending series of smaller replicas of itself, totalling eightyfour, the grand *śikhara* of the Kandariyā is a lofty and intricately-ornamented pile, somewhat restless in movement but unified in theme and design. Like the other fully-developed *sāndhāra-prāsādas* of Khajuraho, this temple consists on plan of the *ardha-maṇḍapa*, *maṇḍapa*, *mahā-maṇḍapa* with lateral transepts, *antarāla* and *garbha-gṛiha* enclosed by an inner ambulatory with transepts on the sides and the rear. But what distinguishes this temple from the others is that it presents each constituent element of the plan and elevation on a grand scale and with considerable elaboration of design and ornamentation.



Kandariyā-Mahādeva temple. *See p. 56*



Kandariyā-Mahādeva temple, śikhara. *See p. 56*



Kandariyā-Mahādeva temple, sculptures on part of south façade. See p. 56.

To face pl. XXXI



Kandariyā-Mahādeva temple, sculptures on part of north façade. *See p. 56*

Further, it has an extensively indented plan with the largest number of projections and recesses which are rhythmically carried up on the elevation.

The Kandariyā is the only temple of Khajuraho where the *jagatī* shows projections on the lateral sides and the rear, corresponding to the projections on the transepts. Again, of all the Khajuraho temples, it has the loftiest *adhishṭhāna* with the most numerous and elegantly-ornamented mouldings, which include two rows of processional friezes teeming with elephants and horses, warriors and hunters, acrobats and musicians, dancers and devotees, and miscellaneous scenes including erotic couples. It is also notable among the local temples in addorsing numerous smaller niches containing couples over the *kumbha* and *kalaśa*-mouldings of the *adhishṭhāna.* The largest number of sculptures of alluring beauty appear on the three bands of its *jaṅghā* and represent an animated array of gods and goddesses, *mithunas* and *apsarases* on projections and *śārdūlas* and *nāgīs* in recesses, the last forming a special feature that this temple shares with the latest temple at the place, the Dūlādeo (below, p. 59).

The interior of the Kandariyā temple is largely similar in design to that of the developed local temples but is more spacious and gorgeous and is replete with a lavish wealth of carvings and sculptures on the pillars and architraves, brackets and ceilings and on the wall-niches and faces of the sanctum. While some Khajuraho temples (e.g., Lakshmaṇa and Javārī) show only one *makara-toraṇa* at the entrance, the Kandariyā is the only temple which displays two of them, both of exquisite design in the interior. With seven *śākhās* or vertical components the doorway of the sanctum is more elaborate than those of most of the Khajuraho temples, which have only five.

Lastly, the sculptures on this temple are conspicuously slender and taller and show the richest variety of *apsaras*-types in lively and often violently-agitated postures. Exhibiting a mastery in the rendering of female contours and revealing a peak of conscious sophistication and exuberant grace, these sculptures represent the high watermark of the characteristic art-diction of Khajuraho.

As this temple was anticipated by the Viśvanātha temple, which was completed in *circa* 1002 (above, p. 56), it is slightly later than the Viśvanātha and may plausibly be assigned to the latter part of Vidyādhara's reign or to *circa* 1025-50. Colour is lent to this suggestion by the find of a short epigraph on a *maṇḍapa*-pilaster of this temple, mentioning a king called Viriṁda, which may have been a pet name of Vidyādhara.

J. Vāmana (pl. XXXIV)

This temple, dedicated to the Vāmana form of Vishnu, is a *nirandhāra-prāsāda,* consisting on plan of a *sapta-ratha* sanctum, *antarāla, mahā-maṇḍapa* with lateral transepts and *ardha-maṇḍapa,* of which only the plinth has survived. Of all the temples at Khajuraho it bears the closest resemblance to the Ādinātha, which is also a *nirandhāra-prāsāda* with a *sapta-ratha śikhara,* likewise bereft of any subsidiary *śikharas* and embellished with a fretwork of *chaitya*-arches. On general plan and in design, particularly of the interior, this temple also resembles the Jagadambī and Chitragupta. In contrast to all of the developed local temples, erotic scenes are absent here, except in the subsidiary niches of the roof-pediments. Another noteworthy feature of the temple is that the top or third row of the *jaṅghā* shows niches containing diamonds in place of sculptures, a feature shared by the subsidiary shrines of the Lakshmaṇa. It is, however, unique among the Khajuraho temples in showing a *saṁvaraṇā*-roof over the *mahā-maṇḍapa* and

in exhibiting *śāla-bhañjikā* brackets also on the ceilings of the balconied windows (*chandrāvalokanas*) of the *mahā-maṇḍapa* transepts.

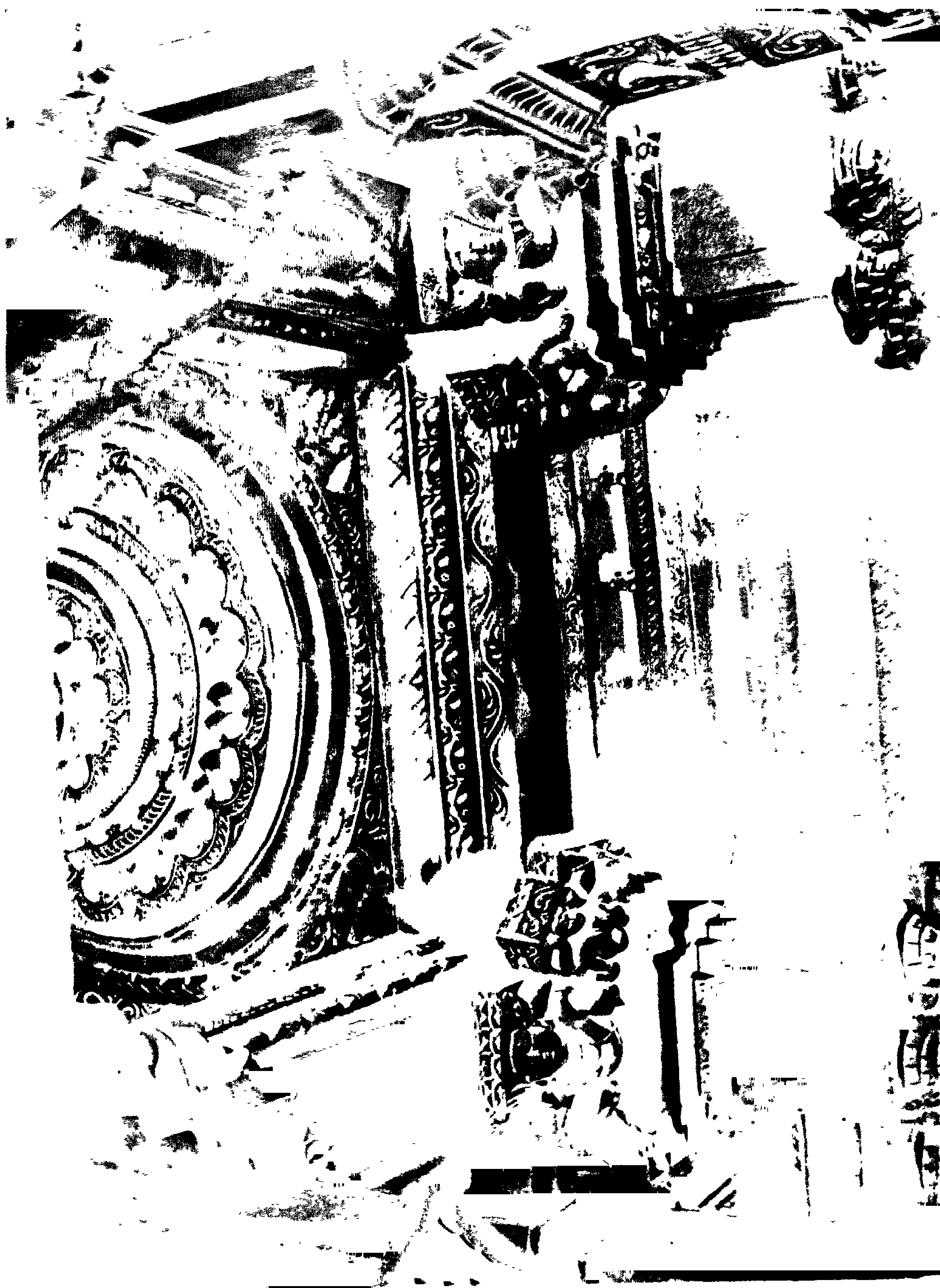
The squat and massive proportion of the *śikhara* of the temple and the occurrence of diamonds in place of sculptures on the uppermost register of the *jaṅghā* are early features, which indicate that the temple was anterior to the Ādinātha. This temple shows only one example of double loops suspended from the *mekhalā* of sculptured figures, which become progressively common on the later temples, including the Ādinātha. The complete absence of *dhammilla*-type of head-dress on its *apsaras* figures indicates that the temple is later than the Kandariyā, the sculptural types and style of which it perpetuates. This temple is, therefore, to be placed after the Kandariyā temple and before the Ādinātha and may be assignable to *circa* 1050-75.

K. Ādinātha

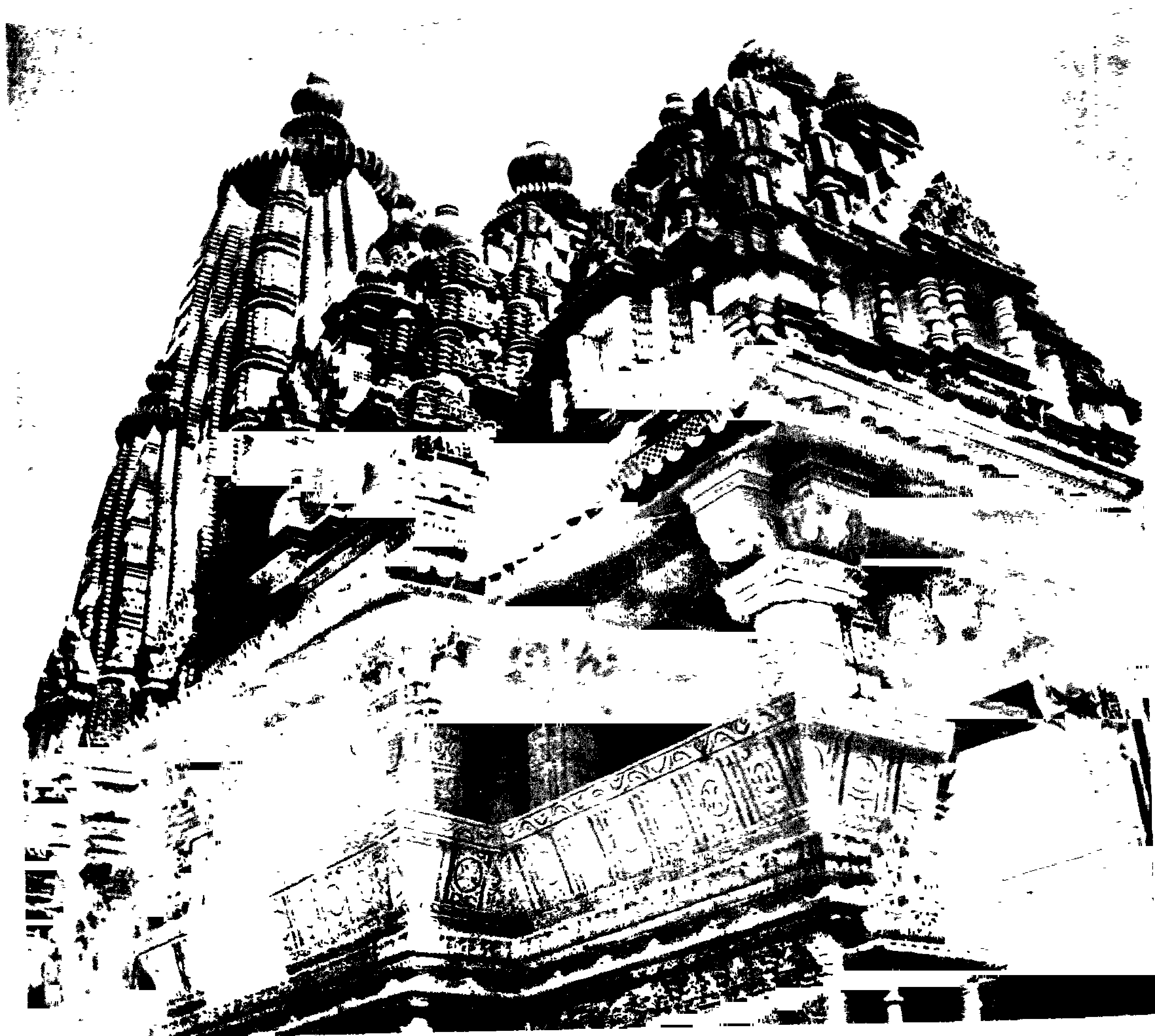
This temple, dedicated to Jina Ādinātha, is a *nirandhāra-prāsāda*, of which only the *garbha-gṛiha* and *antarāla* have survived with their roofs. In the elegance of sculptural style as well as in general plan and design, it bears the closest kinship to the Vāmana. In fact, the only noteworthy difference between them lies in the decoration of the top row of the *jaṅghā*, which in the case of the Vāmana shows diamonds in niches but represents in the Ādinātha a spirited band of flying *vidyādharas*, also found on the Javārī, Chaturbhuja and Dūlādeo. As the *śikhara* of the Adinātha is not as squat and heavy as that of the Vāmana but shows better proportions, it appears to be slightly more evolved and later in date by about a decade or two than the Vāmana, which is also attested by the sculptural style already noted in the previous paragraph.

L. Javārī (pl. XXXV)

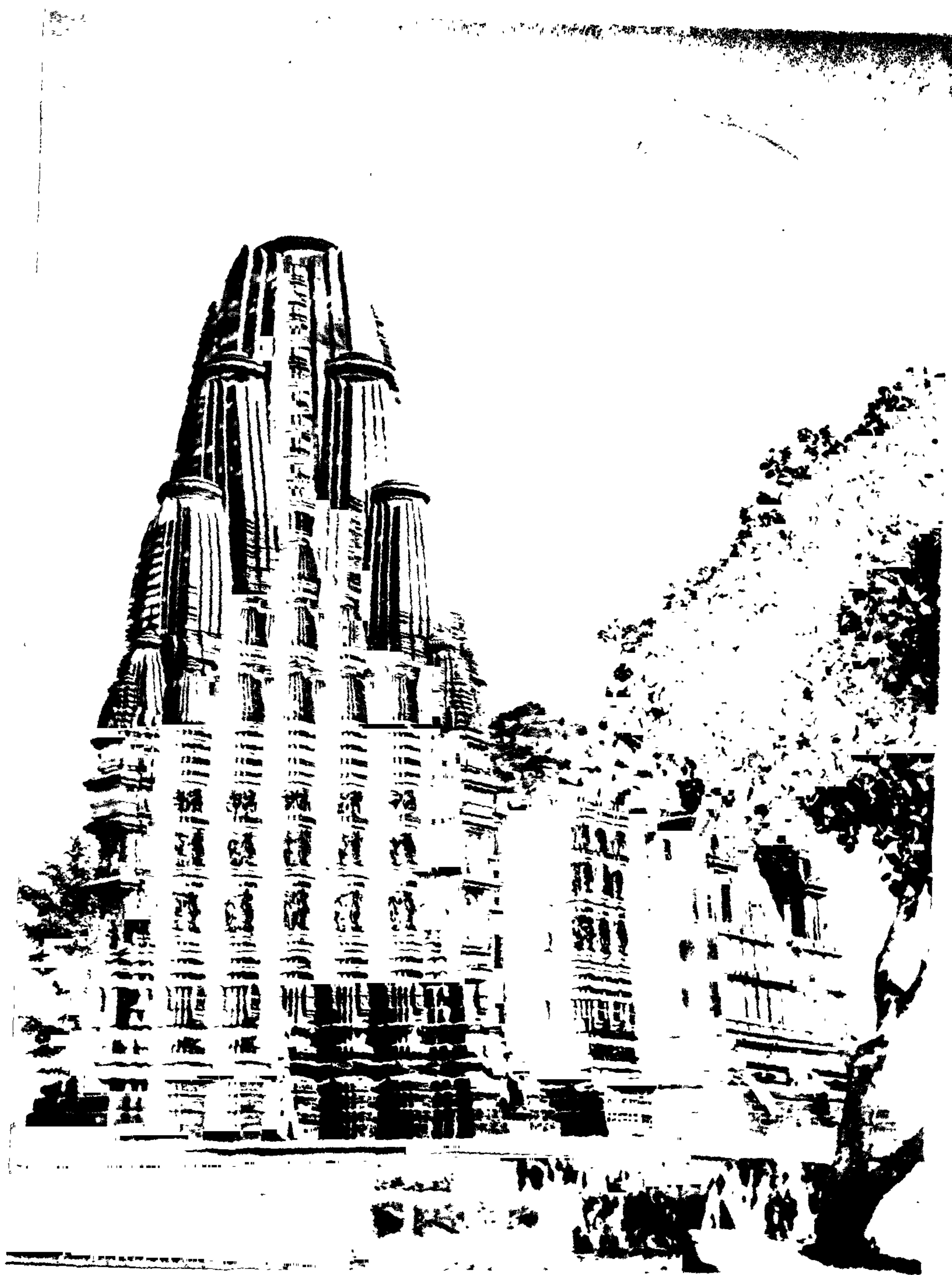
This Vishṇu temple is a small but well-proportioned *nirandhāra-prāsāda*, consisting of a *garbha-gṛiha*, inconspicuous *antarāla*, *maṇḍapa* and *ardha-maṇḍapa*. It is a gem of architecture and is remarkable as much for its ornate *makara-toraṇa* as for the slender and soaring outline of its *śikhara*. On general plan and in design, the temple resembles the Chaturbhuja, which is also a *nirandhāra-prāsāda* with a constricted *antarāla*. It is unique among the Khajuraho temples in showing two significant architectural features. First, the crowning mouldings of its *jaṅghā* show the *bharaṇī* (pillar-capital) and *kapota* surmounted by a prominent *kūṭa-chhādya*, which is characteristic of the medieval temples of Gujarat. Secondly, the gods on the lower row of the *jaṅghā* are placed here in a niche framed by circular pilasters crowned by a diamond and canopied by a *toraṇa*-arch. This feature is also found on the medieval temples of Gujarat, but the nearest analogy is provided by the Udayeśvara temple at Udaipur (1059-80) and the larger Sās-bahū temple at Gwalior (1093). Further, no *apsaras* on this temple wears the *dhammilla*-type of head-dress, and a fair number of them are represented wearing a *mekhalā* with a double series of pendant loops. Again, the *chaitya*-arches forming the lattice-pattern on the *śikhara* are of a broad and complicated design. Lastly, the figures of water-divinities on its door-sill are represented as dancing and resemble those of the Dūlādeo (below, p. 59). On the grounds of architectural design and sculptural style, therefore, this temple may be placed between the Ādinātha and Chaturbhuja temples and dated between *circa* 1075-1100.



Vāmana temple, interior of mahā-maṇḍapa. *See p. 57*



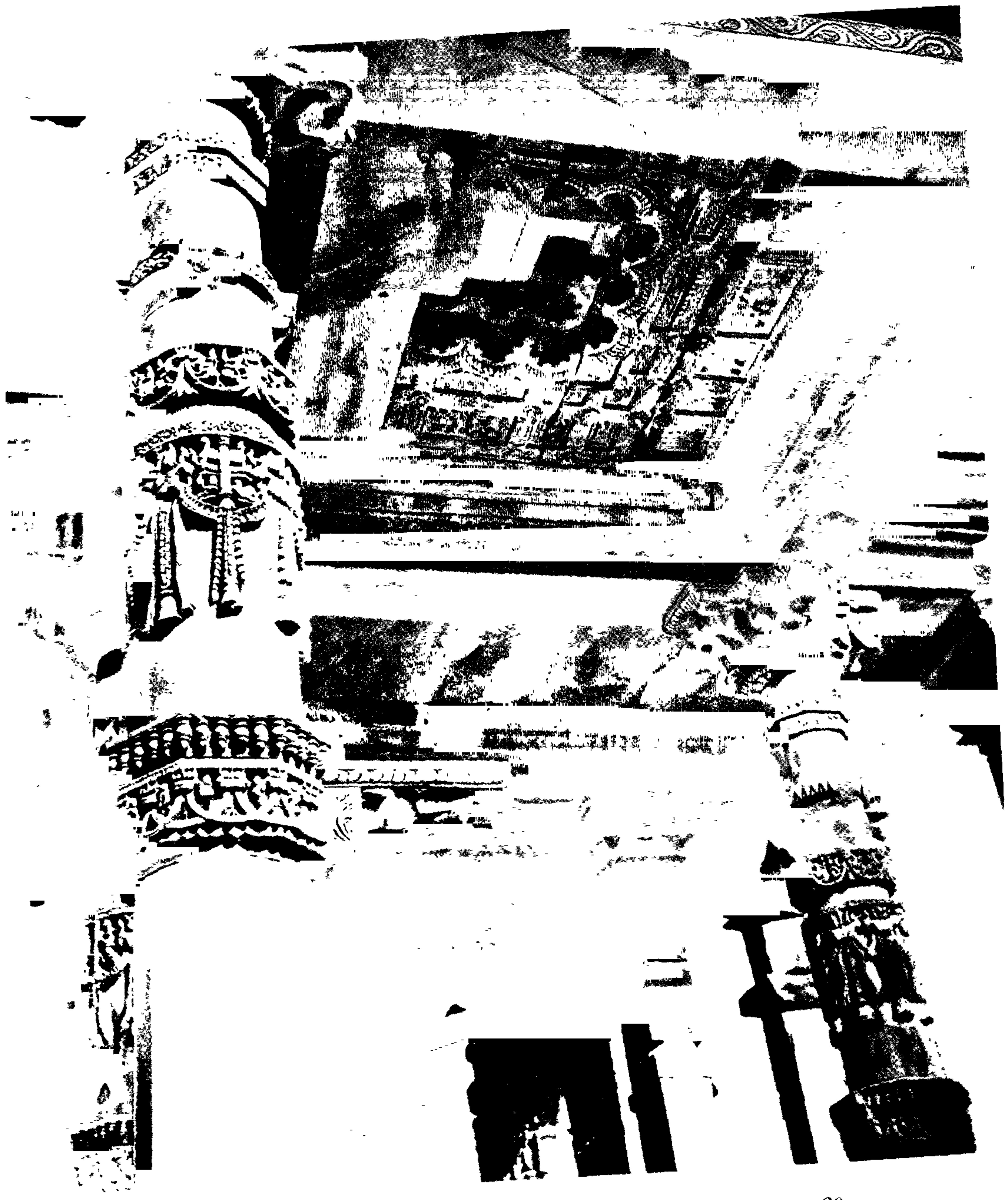
Javārī temple. See p. 58



Dūlādeo temple. *See p. 79*

To face pl. XXXV

PLATE XXXVII



Ghaṇṭai temple, pillars and ceiling of maṇḍapa. *See p. 60*

M. Chaturbhuja

This temple, dedicated to a peculiar form of Vishṇu, is a *nirandhāra-prāsāda*, similar to the Javārī, and consists of a *garbha-gṛiha*, constricted *antarāla*, *maṇḍapa* and mutilated *ardha-maṇḍapa*. The temple is *sapta-ratha* on plan. Its *śikhara* is relatively squat and heavy and free from subsidiary *śikharas*.

The temple shows some notable features. This is the only sandstone temple of Khajuraho which lacks erotic sculptures. In general, the sculptural art here shows a definite decline. The ornaments are only sketchily represented, the details being left unfinished. The representations of animal-mounts are crude and insipid. The sculptures, including those of *apsarases*, are stereotyped and without much life or expression, the only exception being the *vidyādhara*-figures, which are represented in lively poses. Thus, in plastic theme and style this temple comes closest to and cannot be far in date from the latest temple of Dūlādeo, with which it shares a few typical ornaments, e.g., the meandering pattern of *śārdūlas* on the doorway and the large *chaitya*-arches on the bases of the sanctum-pillars. The two temples also agree in leaving some of the *apsaras*-figures half-finished. Further, most of the *apsarases* and some of the gods are represented on this temple as wearing double loops suspended from the *mekhalā*. Lastly, the niches of this temple are invariably framed by circular pilasters, which is a feature of late temples. The Chaturbhuja may, therefore, be placed between the Javārī and the Dūlādeo and is datable to *circa* 1100.

N. Dūlādeo (pl. XXXVI)

This temple, dedicated to Śiva, is a *nirandhāra-prāsāda* and consists of a sanctum, *antarāla*, *mahā-maṇḍapa* and *ardha-maṇḍapa*. On plan and in design, its *sapta-ratha* sanctum is unique at Khajuraho and like the developed medieval temples of the Deccan and western India, is built as if by rotating a square round a central axis. While its *śikhara* is of the usual developed form, clustered round by three rows of *uraḥ-śṛiṅgas* and *karṇa-śṛiṅgas*, its *mahā-maṇḍapa* shows some peculiarities of design and decoration. Externally, the *kakshāsana* over the *mahā-maṇḍapa* and *ardha-maṇḍapa* shows an unusually tall *vedikā*. Internally, the octagonal hall of the *mahā-maṇḍapa* has the largest span (18½ ft. in diameter) among all the Khajuraho temples and shows twenty *apsaras* brackets abutting against its corbelled circular ceiling. Generally speaking, the disposition of its *mahā-maṇḍapa* and its ceiling-design showing *apsaras* brackets are reminiscent of some of the medieval temples of western India, but the grouping of such brackets in bunches of two or three and the details of their treatment are peculiar to this temple.

Even in respect of plastic style and decoration, the Dūlādeo temple has many individual features which distinguish it from the rest of the Khajuraho temples. While the dancing *apsarases* of its interior and the flying *vidyādharas* on the top row of its façades show vigorous tension and dynamic movement, its sculptures are generally stereotyped and overburdened with ornamentation. This is strikingly illustrated by the elaborately-crowned and ornamented *apsarases* forming the brackets of the *mahā-maṇḍapa* and *ardha-maṇḍapa* and by the river-goddesses standing under umbrellas decorated with pompons. While some figures on this temple are of exceptional artistic merit, the plastic treatment has, on the whole, become fluid and in many cases lacks depth of relief, which is evident on a majority of the *apsaras* figures of the exterior.

The iconography of this temple also shows some distinctive traits. The Nandīśvara figures are invariably depicted here with a crocodile-mount in place of the usual Nandin,

while Yama and Nirṛiti wear their raised curls in a stylized fan-shape. The façades of this temple carry tedious repetitions of the images of standing Śiva and Śiva-Pārvatī. The repetition *ad nauseam* of the same images with identical attributes is a glaring departure from the decorative scheme followed in other Khajuraho temples and bespeaks a poverty of ideas and an artistic degeneration.

The conventionalization and stencil-like execution of some of the familiar designs, e.g., pot-and-foliage, scrolls and *chaitya*-arches, has also proceeded quite far on this temple.

Thus, plastically and iconographically, this temple marks the exhaustion of the remarkable vitality for which the Khajuraho sculptures are justly famous, and its peculiarities, both sculptural and architectural, are such that it could be placed only at the end of the fine series of the Khajuraho temples. The above considerations, combined with the advanced proto-Nāgarī characters of its graffiti, indicate that this temple cannot be dated earlier than *circa* 1100 and may reasonably be assigned to 1100-50.

O. GHAṆṬAI (pl. XXXVII)

The temple, locally called Ghaṇṭai on account of the chain-and-bell (*ghaṇṭā*) motifs so prominently carved on its tall elegant pillars, is the fragmentary shell of a structure which was essentially of the same design as the Pārśvanātha temple but was grander in conception and nearly twice as large in dimensions. All that has survived is an *ardha-maṇḍapa* and a *mahā-maṇḍapa*, each resting on four pillars and supporting a flat but ornate ceiling. Its *mahā-maṇḍapa*, like that of the Pārśvanātha, is entered through an elaborate doorway and was originally enclosed by a solid wall, of which only a few supporting pilasters have survived. As in the Ādinātha, the architrave surmounting the doorway of this temple is carved with the sixteen auspicious symbols seen in the dream by Jina Mahāvīra's mother at the time of conception.

The similarity of plan and design between this and the Pārśvanātha indicates that the two temples cannot be far removed in date from each other. Of the two, the Ghaṇṭai appears to be larger and slightly more evolved and consequently, perhaps, little later. This is also attested by the more conventional and later art of its carvings and surviving figure-sculptures and corroborated by the advanced palaeography of the two short graffiti engraved on its pillars. It is, therefore, datable to the end of the tenth century on grounds of sculptural and architectural styles, supported by the evidence of palaeography.

5. ICONOGRAPHY

Both qualitatively and quantitatively, the images on the Khajuraho temples are of great iconographical interest. Besides numerous gods and goddesses of the Brāhmaṇical and Jaina pantheons, different forms of lower deities like *vidyādharas*, *gandharvas*, *nāgas*, *gaṇas*, *bhūtas* and *apsarases* are also represented on the exterior as well as the interior of the temples. Like the *dik-pālas*, *nava-grahas* and the river-goddesses, they have no sectarian affiliations and appear promiscuously on temples of all sects. With a marked preponderance of Śiva images, of both benevolent and terrific varieties, even on the Vaishṇava and Jaina temples, Khajuraho has also an amazingly large variety of other Śaiva deities, like Gaṇeśa and Kārttikeya, numerous forms of *śakti*, including Durgā, Pārvatī, Bhairavī,

Kālī and the seven mothers, of Vishṇu and his incarnations, including Varāha, Narasiṁha, Vāmana, Rāma, Balarāma and Kṛishṇa, and of other Brāhmaṇical deities like Sūrya, Sarasvatī and Brahmā. Among the rare iconographic forms may be mentioned the Śaiva deities Nandīśvara and Pārvatī as *godhāsanā*, Vaishṇava deities Śaṅkha-purusha and Nārasiṁhī, Hayagrīva, Kari-varada, Vaikuṇṭha and Ananta forms of Vishṇu, the last two bearing three heads—of the lion, man and boar—and differing only in the number of hands as enjoined by the *śāstras*, and Mahā-Lakshmī or Gaja-Lakshmī with a lion-mount. On no site have so many gods been represented with their consorts as *āliṅgana-mūrtis* as at Khajuraho, which contains sculptures of Indra and Śachī, Brahmā and Sāvitrī, Kāma and Rati, Gaṇeśa and Vighneśvarī, Rāma and Sītā, Balarāma and Revatī and Paraśurāma and his consort, in addition to numerous figures of Śiva-Pārvatī and Lakshmī-Nārāyaṇa. But the composite images, combining the features of two or more gods, are of even greater interest and include Hari-Hara, Hari-Hara-Pitāmaha or Dattātreya, Hari-Hara-Hiraṇyagarbha (Sūrya combining the features of Brahmā, Vishṇu and Śiva) and a six-headed, four-legged and twelve-armed sculpture of Sadāśiva combining the characteristics of Brahmā and Vishṇu (found in an interior niche of the Kandariyā-Mahādeva temple).

The niches on the *bhadras* of the sanctum generally contain images either of the *parivāra-devatās* or of different aspects of the deity to whom the temple is dedicated. The remaining niches of the façades, like those of the interior, generally show images of other deities, not necessarily connected with the main deity. This is also true of the niches on the roofs of the temple, though the principal niche of the *śukanāsikā* does contain generally an allied form of the principal deity. The lintel of the sanctum-doorway invariably represents in the middle (*lalāṭa-bimba*) a significant replica or associate of the main deity, usually surmounted by the *nava-grahas*, while Gaṅgā and Yamunā are depicted on the jambs flanked by *dvāra-pālas*, appropriate to the enshrined deity.

The eight *dik-pālas* are, as a rule, correctly represented in their respective places on the façades of the temple or of the sanctum proper in the case of the *sāndhāra-prāsādas*. Usually the *dik-pālas* occur in pairs at each corner, Indra and Agni in the south-east, Yama and Nirṛiti in the south-west, Varuṇa and Vāyu in the north-west, and lastly, Kubera and Īśāna in the north-east. They are generally represented as four-armed, but on the subsidiary shrines of the Lakshmaṇa and Parśvanātha temples a few *dik-pālas* possess only two arms. Accompanied by their respective mounts and carrying their distinctive attributes usually in two out of the four hands, they show a remarkable uniformity, to which only sporadic variations have been recorded. The respective mounts of Indra, Yama, Varuṇa and Īśāna are uniformly shown as the elephant, buffalo, crocodile and Nandin. The characteristic mount of Agni is the ram or goat, which is represented in a zoo-anthropomorphic form in a solitary case. On the Brāhmaṇical temples Nirṛiti is represented as *nara-vāhana*, but on the Jaina temples his mount is a bull or a dog. The deer-mount of Vāyu is replaced in one case by a donkey. Normally Kubera is represented without any mount, but is seated on or beside jars (*nidhis*). In two examples he is represented with a ram-mount, while in four cases his mount looks like a dog.

The *dik-pālas* are usually represented in the lower register of the *jaṅghā* and are surmounted in the upper register by figures of Nandīśvara, which forms a distinctive trait of the Khajuraho temples. Nandīśvara is represented with the head of a bull and with four arms, usually carrying the attributes of Śiva and likewise accompanied by Nandin as *vāhana*. The Dūlādeo temple is unique in showing a crocodile as his mount. The Nandīśvara figures are, however, absent in the Jagadambī and Pārśvanātha temples.

The Viśvanātha and Kandariyā-Mahādeva temples, which are both Śaiva shrines, show in the prominent niches, projecting from their *adhishṭhāna*-façades, dancing figures of the seven mothers together with dancing Gaṇeśa and Vīrabhadra or Pārvatī. Beginning with the south-east the niches in these temples contain, in the order of *pradakshiṇā*, Gaṇeśa, Chāmuṇḍā, Indrāṇī, Vārāhī, Vaishṇavi, Kaumārī, Māheśvarī and Brahmāṇī. The last or the north-eastern niche of the Kandariyā-Mahādeva temple contains Vīrabhadra, while that of the Viśvanātha temple shows Pārvatī. The façades of the Kandariyā and Viśvanātha mainly have various forms of Śiva figures in all the three rows, interspersed with the *dik-pālas* in the lower row and occasional figures of other Brāhmaṇical gods like Vishṇu, Brahmā or Kārttikeya in the upper rows. The façades of the Śaiva temple of the Dūlādeo carry, besides the figures of the *dik-pālas* and Nandīśvara, repeated representations of two types of images: (1) four-armed standing Śiva, carrying the *varada*, *triśūla*, serpent and water-vessel, and (2) standing Śiva-Pārvatī. The repetition of the same images with identical attributes is an individual feature of this latest temple, indicative of artistic degeneration (above, p. 59). The three Śaiva temples, however, exhibit a uniformity in the representation of images on the *bhadra*-niches of the sanctum. Thus, the Kandariyā and Dūlādeo temples show Andhakāntaka, Naṭarāja and Tripurāntaka in such niches respectively on the south, west and north, while the Viśvanātha differs only in regard to the north niche, where Ardhanārīśvara is represented in place of Tripurāntaka.

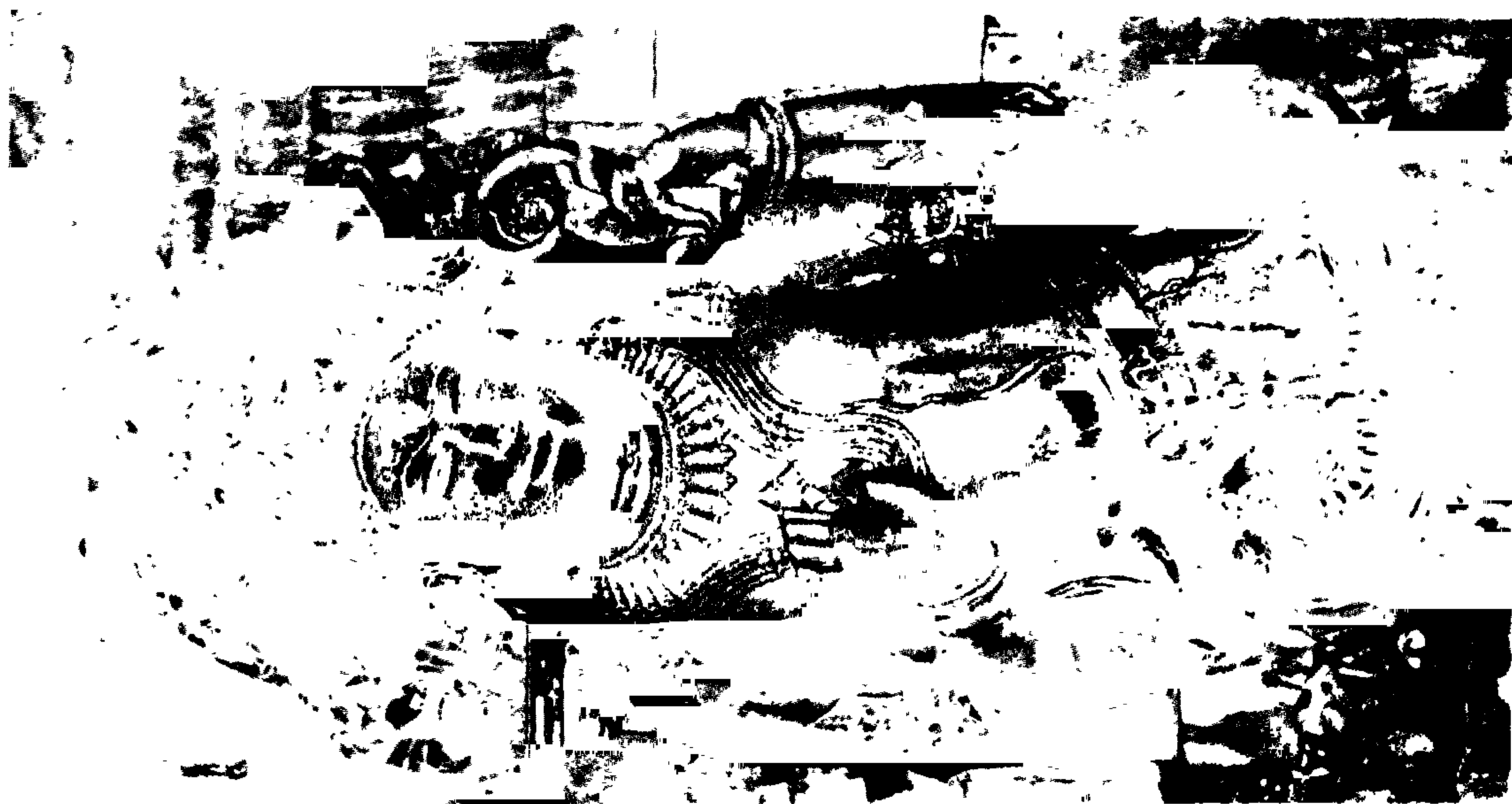
On the Vaishṇava temples different aspects of Vishṇu are given prominence in the niches. The principal or the lower *bhadra*-niches of the sanctum of the Vāmana contain representations of the Bhū-Varāha, Narasiṁha and Vāmana incarnations of Vishṇu, while those of the sanctum proper of the Lakshmaṇa represent the first two with Hayagrīva as the third. The corresponding niches of the Javārī depict Bhū-Varāha, Narasiṁha, and Sūrya as Hari-Hara-Hiraṇyagarbha. The upper *bhadra*-niches of the Vāmana and Javārī show Brahmā-Brahmāṇī, Śiva-Pārvatī and Lakshmī-Nārāyaṇa, while those of the Lakshmaṇa contain three similar representations of Yogāsana-Vishṇu, of which two relate to the Fish- and Tortoise-incarnations, as indicated by the miniature representations of these animals. The Lakshmaṇa temple is also unique in representing, in six out of its nine outer niches, a similar four-armed god wearing the *jaṭā-mukuṭa* and carrying the rosary, lotus-stalk and book in three hands, the fourth hand being invariably mutilated. More remarkable than these are the numerous scenes from the *Kṛishṇa-līlā* appearing in the uppermost row of the *jaṅghā* of the sanctum proper, representing the subjugation of Kuvalayāpīḍa, *śakaṭa-bhaṅga*, *Arishṭāsura-vadha*, *Yamalārjuna* (pl. XXXIX A), *Vatsāsura-vadha*, *Tṛiṇāvarta-vadha*, *Kāliya-damana*, *Pūtanā-vadha*, acceptance of scented paste from Kubjā, duel with Chāṇūra and Śala and the killing of Sūta Lomaharshaṇa by Balarāma.

The Chitragupta temple, which is the only temple at Khajuraho dedicated to the Sun-god, shows in the principal or lower *bhadra*-niches of the sanctum eleven-headed Vishṇu in the south, representing Vishṇu and his ten incarnations, Sūrya as Hari-Hara-Hiraṇyagarbha in the west and Bhū-Varāha in the north. The upper niches respectively represent Brahmā-Brahmāṇī, Śiva-Pārvatī and Lakshmī-Nārāyaṇa.

The Jaina temples of Khajuraho enshrine images of *jinas* and depict Jaina deities on the niches and the doorways. For the rest they agree with the other local temples. The Pārśvanātha temple even exhibits on the façades a preponderance of Brāhmaṇical deities, a few of which, like Rāma, Paraśurāma and Balarāma represented with their consorts, are of absorbing iconographic interest. The doorways of the Jaina temples invariably represent Chakreśvarī Yakshī on the *lalāṭa-bimba*, while the door-jambs and



B. *Pārśvanātha temple. Balarāma and Revatī. Ht. 2 ft. 10 in. See p. 65*



A. *Chaturbhuja temple, main deity. Ht. 7 ft. 5 in. See p. 65*



A. *Lakshmaṇa temple, Krishṇa uprooting Yamalārjuna. Ht. 1 ft. 8 in. See p. 65*



B. *Lakshmaṇa temple, apsaras sporting with ball. Ht. 2 ft. 9 in. See p. 65*



A. *Pārśvanātha temple, apsaras painting her foot. Ht. 2 ft. 10 in.* *See p. 65*



B. *Viśvanātha temple, apsaras playing on flute. Ht. 2 ft.* *See p. 65*

To face pl. XXXIX



A. *Kandariyā-Mahādeva temple, apsaras with contorted figure in the act of removing thorn. Ht. 2 ft. 2 in.* *See p. 65*



B. *Dulādeo temple, dancing apsaras. Ht. 3 ft. 2 in.* *See p. 65*



Ādinātha temple, dancing apsarases. Ht. 1 ft. 10 in. See p. 65

to face pl. XLI



Dulādeo temple, flying figure. Ht. 1 ft. 4 in. *See p. 65*



Dulādeo temple, apsaras-brackets. See p. 65

To face pl. XLIII



Jagadambī temple, amorous couple. Ht. 1 ft. 2 in. See p. 61

To face p. 61

niches show mostly other Jaina deities including the *vidyā-devīs* and *śāsana-devatās*, besides figures of *jinas*. The sixteen auspicious symbols,[1] seen in the dream by Vardhamāna's mother, according to the Digambara tradition, are represented on the architrave above the doorway of almost all the Jaina temples and shrines, except the Pārśvanātha.

6. SCULPTURAL ART

The sculptures at Khajuraho are divisible into five broad categories. The first category comprises cult-images executed almost completely in the round. These are formal and generally stand in *sama-bhaṅga* and have a large *prabhāvalī* and a back-slab decorated with figures of attendant gods and goddesses. As these are images fashioned in strict conformity with canonical formulae and prescriptions of proportions, *lakshaṇas* and *lāñchhanas*, they reveal a thin aesthetic vision. There are a few exceptions, of which the colossal image, enshrined as the principal deity of the Chaturbhuja temple, is note-worthy. This image is less formal and, unlike other enshrined deities, stands in an elegant *tri-bhaṅga* and has a dignified expression of transcendental calm and bliss (pl. XXXVIII A).

The second category of sculptures comprises *parivāra-*, *pārśva-* and *āvaraṇa-devatās*, besides numerous gods and goddesses. These occur in the niches or are figured against the walls of the temple and are executed either in the round or in high or medium relief. Those occurring in the niches are more formal and partake of the iconographic qualities of the cult-images of the first category. The remaining figures of gods and goddesses, which include those of the *dik-pālas*, are less formal and more free. These usually stand in a lively *tri-bhaṅga* and are distinguishable from human figures only by their peculiar head-dress (*jaṭā-*, *kirīṭa-* or *karaṇḍa-mukuṭa*), or by their mounts or special attributes, held usually in more than two hands. In most cases the gods wear the same dress and ornaments as human figures and are to be distinguished from the latter by a sign of diamond on the chest (it is the same as the *kaustubha-maṇi* on the chest of Vishṇu and the *śrīvatsa-lāñchhana* on the chest of *jina* figures) and by a long *mālā*, resembling the *vaijayantī-mālā* of Vishṇu, which constitute the cognizances of gods at Khajuraho.

The third category consists of the *apsarases* or *sura-sundarīs*, who account for the finest and most numerous sculptures at Khajuraho, executed either in the round or in high or medium relief, on the *jaṅghā* and in the minor niches of the façades and on the pillar- or ceiling-brackets or the recesses between pilasters in the interior. The *sura-sundarīs* are invariably represented as handsome and youthful nymphs, attired in the choicest gems and garments and full of winsome grace and charm. As heavenly dancers (*apsarases*), they are shown as dancing in various postures. As attendants of the higher divinities, they are represented with hands in *añjali* or in some other *mudrā*, or as carrying the lotus-flower, mirror, water-jar, raiments, ornaments, etc., as offering for the deities. But more often the *sura-sundarīs* are portrayed to express common human moods, emotions and activities and are often difficult to distinguish from conventional *nāyikās*. Such are the *apsarases* shown as disrobing, yawning, scratching the back, touching the breasts,

[1] The symbols enumerated in the Jaina texts and represented on the Ghaṇṭai and Ādinātha temples are :—(1) Airāvata, the elephant of Indra, (2) the noblest bull, (3) the noblest lion, (4) Śrī-devī, (5) a pair of garlands, (6) the moon, (7) the rising sun, (8) a pair of full vases, (9) a pair of fish, (10) a lake, (11) an agitated sea, (12) a lion-throne, (13) the *vimāna*, (14) *Nāgendra-bhavana*, (15) a heap of jewels and (16) Agni representing smokeless fire.

rinsing water from the wet plaits of hair,[1] removing thorn, fondling a baby, playing with pets like parrots and monkeys, writing a letter, playing on a flute or *vīṇā*, painting designs on the wall or bedecking themselves in various ways by painting the feet, applying collyrium, etc. Behind the familiar human façade of the *sura-sundarīs* is hidden a deeper meaning and symbolism. For example, the *apsaras* sporting with a ball recalls to mind the legend of Vishṇu who sported with a ball as Mohinī and so enchanted the *asuras* with voluptuous charms as to delude them of their share of immortality. Thus this motif symbolically asserts the power of absorption of beauty in her ego which leads to delusion.

The fourth category consists of secular sculptures, which comprise miscellaneous themes including domestic scenes, teacher and disciples, dancers and musicians and erotic couples or groups. The last have yielded some of the finest sculptural compositions of Khajuraho, vibrating with a rare sensitiveness and warmth of human emotion. Some of the erotic couples like those of the Jagadambī temple (pl. XLV) are distinguished by an expression of intense absorption and rapture, which transcend from the physical to the spiritual plane.

The fifth or the last category consists of sculptures of animals including the *śārdūla*, which is a heraldic and fabulous beast, primarily represented as a rampant horned lion with an armed human rider on the back and a warrior counter-player attacking it from behind. Numerous varieties of this basic type are known with heads of elephant, man, parrot, boar, etc. The *śārdūla* is normally figured in the recesses of the *jaṅghā* but also appears on the *śukanāsikā* and in the interior. Like the *apsaras*, this is a most typical and popular sculptural theme of Khajuraho and is invested with a deep symbolism.

The sculptural art of Khajuraho draws amply on the classical tradition but is essentially medieval. Situated as Khajuraho is in the heart of central India, which is open to the artistic influences from the east and the west, its art is a happy combination of the sensuousness of the east with the nervous angular modelling of the western idiom. Though this art cannot compare with the classical Gupta art in sublimity, depth of feeling and expression of inner experience of the artist, it pulsates with a human vitality which is amazing. One is struck by the immensity and throbbing warmth of the Khajuraho sculptures which are completely liberated from their wall-surface and stand out almost fully in the round as enchanting lyrics of modelled beauty.

The modelling at Khajuraho generally lacks the flow which characterizes the sculptures of the Gupta age. The plastic volume is usually ample but stereotyped, indicating a thinning down of the plastic vision. The plasticity of the fully-rounded and modelled form is replaced by sharp edges and pointed angles, with a stress on horizontals, verticals and diagonals. Nevertheless, the art of Khajuraho surpasses even the medieval school of Orissa in revealing the sensuous and many-sided charms of the human body. Inspired by an ecstatic joy of living and a consuming passion for the physical beauty, the artist of Khajuraho revelled in admiring the human body from the most fascinating angles which give us fine profiles and the unusual three-quarter profiles and back views. The walls of the Khajuraho temples are a veritable gallery of female types of ravishing beauty, vaunting their voluptuous charms in an infinite variety of lovely attitudes and postures. In fact, this art excels all other contemporary schools of art in the vivid portrayal of human moods and fancies which are often expressed through the medium of gestures and flexions with a subtle but purposive sensuous provocation. Coquettish languor and frankly erotic suggestion form the key-notes which distinguish the Khajuraho art from the contemporary schools of art.

[1] This is known as *karpūra-mañjarī* among the iconographical types illustrated on the Kīrtti-stambha at Chitorgarh.

The classical flavour persists in the sculptures of the Lakshmaṇa and Pārśvanātha temples, which combine subtlety of modelling with an amplitude of volume and a languorous or seemingly serene expression. The tradition is continued in the Viśvanātha and partially in the Jagadambī and Chitragupta. But the sculptures of the later Khajuraho temples, such as the Kandariyā, Vāmana, Ādinātha and Dūlādeo show violent and excited movements. The human frame writhes round its axis, in agitated and impossible flexions, straining the joints almost to a breaking point.

The supple and rounded modelling, combined with a gracefully languorous expression, is illustrated by exquisite figures of Kṛishṇa uprooting *Yamalārjuna* (pl. XXXIX A) and an *apsaras* sporting with a ball (pl. XXXIX B) from the interior of the Lakshmaṇa temple and by the expressive figures of Balarāma and Revatī (pl. XXXVIII B) and an *apsaras* with a plump face and tilted head painting her foot (pl. XL A) from the Pārśvanātha.

The Viśvanātha temple has indeed the most proportionate figures with admirable poise and balance, illustrated by an *apsaras* playing on a flute (pl. XL B). Some of the characteristic sculptural types of Khajuraho are introduced for the first time in this temple. The sculptures of the Jagadambī and Chitragupta are slightly less massive than those of the Viśvanātha, but not quite as slender as those of the Kandariyā and have yielded some of the most artistic figures of erotic couples (pl. XLV).

The characteristic sculptural types of Khajuraho attain their maturity in the Kandariyā-Mahādeva temple which displays tall and slender figures with distinctive physiognomy, writhing round their axis often in highly-contorted postures (pl. XLI A). The Vāmana and Ādinātha carry on the sculptural tradition of the Kandariyā and show elegantly tall figures with tapering legs. They display a wide variety of *apsarases* in many difficult and tortuous poses, illustrated by a dancing *apsaras* from the Ādinātha (pl. XLII).

The sculptural art is on a definite decline in the Javārī and Chaturbhuja temples, which represent largely conventionalized figures without much expression or life. The Dūlādeo represents the last glow of the dying lamp, as it combines highly dynamic and romantic sculptures, such as those of dancing *apsarases* (pl. XLI B) and flying *vidyādharas* (pl. XLIII), with degenerate, stereotyped and lavishly-ornamented figures (pl. XLIV), marking the exhaustion of the remarkable vitality for which the Khajuraho sculptures are justly famous.

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THE ROCK-CUT CAVES OF PITALKHORA IN THE DECCAN

By M. N. Deshpande

CONTENTS

1. INTRODUCTION

The Buddhist caves of Pitalkhora (lat. 20° 20′N., long. 75° 00′E.) are excavated into the rock of the Satamala range, also known as Chandora, on the northern fringe of Aurangabad District, Bombay State, and are approached from a place called Bhamarwadi, 42 miles from Aurangabad, on the road connecting Aurangabad with Chalisgaon in East Khandesh District in the same State. From Bhamarwadi a country-track of 7 miles leads to the caves *via* the villages Upla, Amba and Tanda. As the crow flies, the caves lie 50 miles to the west-south-west of Ajanta and 23 miles to

the north-west of Ellora. They are located in a wild picturesque ravine in the Deccan trap. From the elevated plateau overlooking the ravine by which they are situated is seen at a distance the formidable triangular hill of Khairama, at the foot of which are the remains of the medieval temples of Patan.

Due to the inaccessibility of Pitalkhora, the caves have not attracted wide attention. The earliest account of them seems to have appeared in 1853, when John Wilson gave a very brief description of the *chaitya*-cave (Cave 3, below, p. 72) and the adjoining *vihāra*-cave (Cave 4, below, p. 73), including the paintings in the former and the sculptures in the latter.[1] In their monumental book, *Cave Temples of India*, Fergusson and Burgess gave a more detailed account of the caves and specially mentioned the same *chaitya* and the *vihāra*.[2] In another work[3] Burgess drew particular attention to the capitals on the pilasters of the *vihāra* and dealt with the inscriptions, two in the *chaitya* and the five over the cell-doors of the *vihāra*, recording gifts from the natives of Pratishṭhāna.[4] The characters of the inscriptions in the *chaitya* were ascribed by him to the Mauryan period on account of their supposed resemblance with Aśokan characters.

In more recent years M. G. Dikshit gave a short description of the caves, especially emphasizing the development of their architectural forms.[5] He also mentioned the two unnoticed caves (Caves 10 and 11, below, p. 78) lying on the opposite side of the ravine; though he could not do justice to them, as they were full of débris, he pointed out that they belonged to *circa* first-second centuries A.D. and thus helped in bridging the gap in the development of rock-cut architecture and in providing a continuous history of rock-cut activities at Pitalkhora starting in the second century B. C. and culminating with the re-occupation of the caves in the sixth-seventh centuries A.D.

The caves were taken charge of by the Department of Archaeology, Government of India, in 1953. In the course of the last few years, the two caves noticed by Dikshit have been completely cleared and two more *chaitya*-caves (Caves 12 and 13, below, p. 79) on the same side of the ravine discovered and cleared. Last year were also revealed, during clearance, some unique features in the *chaitya* and the *vihāra* of the previously-known group.[6] This comprehensive all-round clearance has exposed the original architectural features of the caves, as far as they are extant, and has salvaged remarkable sculptures that had fallen with the disintegration of the façade. The prospects were indeed promising, for there were indications that flights of steps had originally existed in both Caves 3 and 4 evidently leading down to a lower forecourt, and the rock-mass of the façade, while falling on the forecourt, must have brought down with it sculptures that perhaps might have existed thereon. Both the supe ficial observations were amply confi med, for unique sculptures, both *in situ* and detached, crystal reliquaries, miniature *stūpas* and inscriptions were discovered as a result of the all-round clearance.

2. PITALKHORA IN ANCIENT TIMES

The caves of Pitalkhora lay on an ancient caravan-route (*sārthavāha-patha*) (fig. 1). Caravans from the Govardhana country (Nasik region) and from Śūrpāraka (Sopara,

[1] *Jour. Bombay Br. Roy. As. Soc.*, IV (1853), pp. 357-60.

[2] J. Fergusson and J. Burgess, *Cave Temples of India* (London, 1880), pp. 242-46.

[3] Jas. Burgess, *Report on the Buddhist Cave Temples and their Inscriptions*, Arch. Surv. West. Ind., IV (London, 1883), pp. 11-12.

[4] *Ibid.*, pp. 83-84.

[5] 'Fresh light on the Pitalkhora caves', *Jour. Bombay Hist. Soc.*, VI, nos. 1-2 (1941), pp. 112-21.

[6] *Indian Archaeology 1957-58—A Review* (New Delhi, 1958), p. 65 and pls. LXXV-LXXIX.

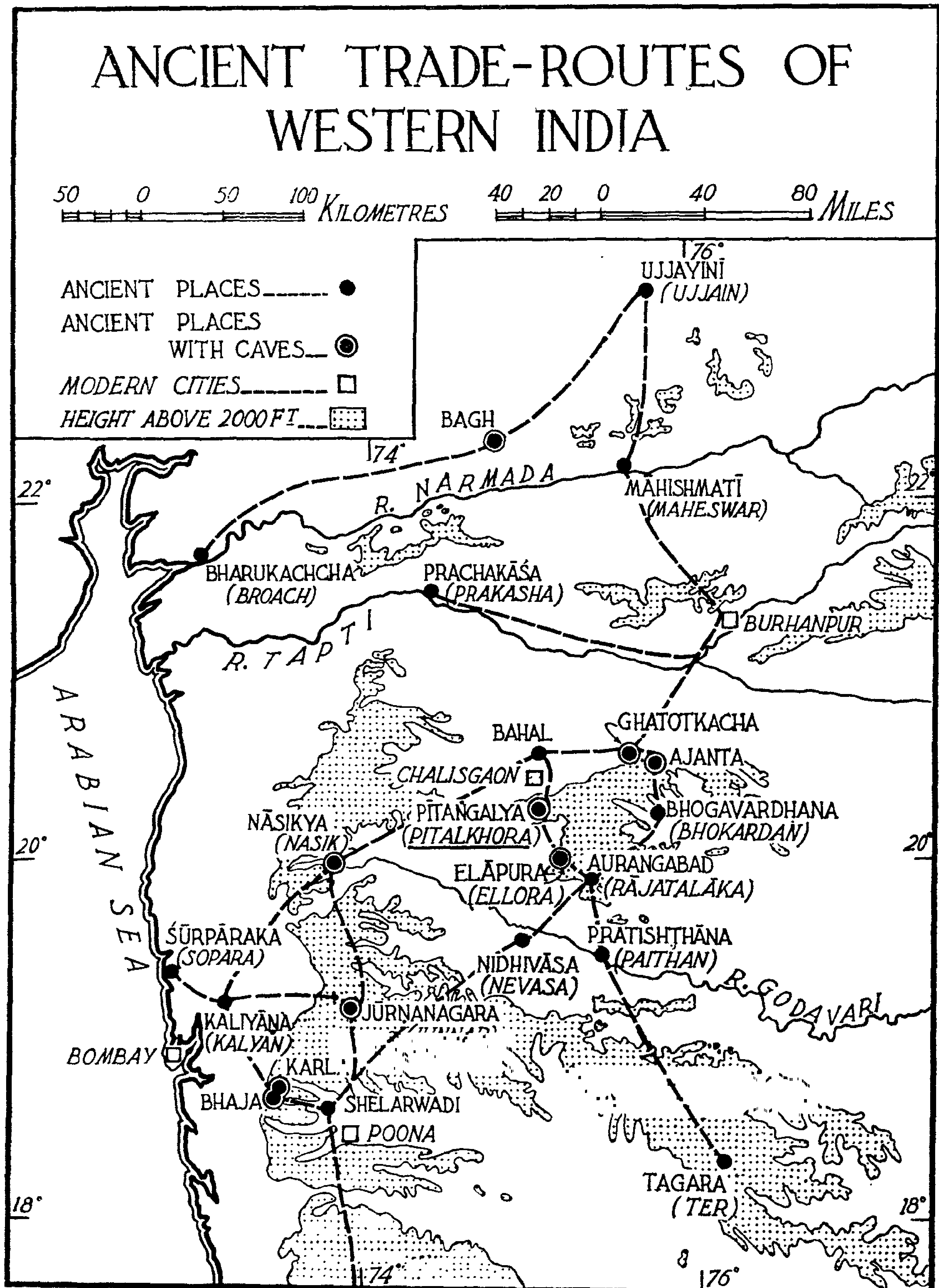

ANCIENT TRADE-ROUTES OF WESTERN INDIA
50 0 50 100 KILOMETRES
40 20 0 40 80 MILES
ANCIENT PLACES
ANCIENT PLACES WITH CAVES
MODERN CITIES
HEIGHT ABOVE 2000 FT.
UJJAYINĪ (UJJAIN)
BAGH
MĀHISHMATĪ (MAHESWAR)
R. NARMADA
BHARUKACHCHA (BROACH)
PRACHAKĀŚA (PRAKASHA)
BURHANPUR
R. TAPTI
ARABIAN SEA
BAHAL
GHATOTKACHA
AJANTA
CHALISGAON
PITANGALYA (PITALKHORA)
BHOGAVARDHANA (BHOKARDAN)
NĀSIKYA (NASIK)
ELĀPURA (ELLORA)
AURANGABAD (RĀJATALĀKA)
ŚŪRPĀRAKA (SOPARA)
PRATISHTHĀNA (PAITHAN)
NIDHIVĀSA (NEVASA)
R. GODAVARI
KALIYĀNA (KALYAN)
JŪRNANAGARA
BOMBAY
KARL
BHAJA
SHELARWADI
POONA
TAGARA (TER)
22°
20°
18°
74°
76°

FIG. 1

District Thana) crossed the Indhyadri hill close to where these caves are situated in order to reach their destination Pratishṭhāna, the capital of the Śātavāhanas and a great commercial centre a few centuries before and after the Christian epoch. The route almost followed the present-day Chalisgaon-Aurangabad-Paithan road; Ellora, which the later Buddhists chose as the site for their rock-cut monasteries, was also on the route. The Outram Pass is thus only recent attempt to provide an all-weather track connecting the plains of Khandesh with the tableland on which Paithan stands.

In this connexion, a little digression is necessary to point out a similar situation of the Ajanta caves as well. The northern route from Ujjain, after crossing the Narmada and proceeding beside modern Burhanpur, came to the ancient town of Bahal (District East Khandesh),[1] from where the caravans either went south, to Pratishṭhāna, or west, to Nasik. Those that went to Pratishṭhāna climbed the Indhyadri range in the vicinity of Ajanta. The road from Bahal to Pratishṭhāna passed beside Aurangabad,[2] which again has Buddhist caves. The identification of the ancient Bhogavardhana[3] with Bhokardan (District Aurangabad), which lies half-way between Ajanta and Aurangabad and where the author recently discovered an ancient habitation-site of the early historical period, supplies a link in this route.

To come back to Pitalkhora. When news of the discoveries here appeared in the press, Shri Pramod Chandra, Assistant Curator, Prince of Wales Museum, Bombay, drew the author's attention to the list of *yakshas* of different places given in the Buddhist text *Mahāmāyūrī*, wherein is mentioned the *yaksha* Saṅkārin as residing at Pītaṅgalya:[4]

..................Pratishṭhāne cha Khaṇḍakaḥ I
Pītaṅgalyeshu Saṅkārī Taraṅgavatyāṁ Sukhāvahaḥ I
Nāsikye Sundaro yaksha Asaṅgo Bharukachchhake I

'Khaṇḍaka (*lives*) at Pratishṭhāna, Saṅkārin at Pītaṅgalya, Sukhāvaha at Taraṅgavatī, Sundara at Nāsikya, Asaṅga at Bharukachchha'.

While Nāsikya is Nasik and Bharukachcha is Broach on the Narmada estuary, Taraṅgavatī may be Taranga (District Mehsana). What is more important for the present purpose is that Pītaṅgalya has been identified with Ptolemy's Petrigala and may also be regarded as the ancient name of Pitalkhora.[5] If this is correct, the sequence of place-names in the *Mahāmāyūrī* almost follows the ancient Pratishṭhāna-Bharukachcha route. Pītaṅgalya-Petrigala was evidently a township, the remains of which exploration may one day bring to light.

3. CHRONOLOGY

There is no doubt that the cave-excavations at Pitalkhora were the outcome of the same architectural activity as was responsible for similar excavations at many other places in the trap-region of the northern Deccan in the centuries just preceding and following

[1] Excavation conducted at this place by the writer in 1952 and 1957 revealed its importance as a flourishing town in the early historical period, with remains of chalcolithic habitation at the lowest levels.

[2] Aurangabad may be identified with Rājatalāka (Rājataḍāga) mentioned in some inscriptions, *Jour. Bombay Br. Roy. As. Soc.*, VI (1861), p. 3; Lüders, 'List of Brāhmī inscriptions', *Epigraphia Indica*, X (1909-10), no. 988.

[3] Mentioned in many early inscriptions, Lüders, *op. cit.*, nos. 264, 266, 295, 296, 373 and 572.

[4] *Jour. U.P. Hist. Soc.*, XV, pt. ii (1942), p. 28.

[5] *Ibid.*, p. 41.

Christ. Again, these caves share the characteristic with other caves in the region of a fairly long desertion after the first phase of activity and a re-occupation during a second phase, in the fifth-sixth centuries A.D. It is customary to associate respectively these two phases, politically, with the Śātavāhana-Kshaharāta and Vakāṭaka régimes and, in terms of Buddhist sectarianism, with the Hīnayāna and Mahāyāna. It should, at the same time, be noted that the second phase did not witness at Pitalkhora any fresh excavation or any extensive re-embellishment by way of the decoration of the cave-façades, etc., with carved Buddha-Bodhisattva figures, which is one of the characteristics of the second phase at almost all other caves in the region: in fact, in the whole range of the Pitalkhora caves, there is not a single sculpture of Buddha or the Bodhisattvas, practically the only evidence of the re-occupation of the caves during the second phase being furnished by the paintings of Buddha-Bodhisattva figures, sometimes accompanied by painted records, in Cave 3 (below, p. 72). Palaeographically, these records are ascribable to *circa* sixth century A.D.[1] Within these limits, the internal chronology of the excavation of the Pitalkhora caves can be only tentatively worked out on general considerations, aided by the evidence of architectural and sculptural forms and inscriptions where available.

Of the caves in Group I (below, pp. 71-78), only Caves 3 and 4 have inscriptions *in situ*; on palaeographical grounds they may be assigned to the second century B.C. These two caves may therefore belong to that period. That they are contemporary with each other is also indicated by their sharing a common forecourt, which shows that their excavation was designed simultaneously. Cave 2, which too faces the same forecourt, may also belong to that period.

The remains of Cave 1 are too scanty to be of any use for dating purposes, but its contiguity with those mentioned above may indicate more or less the same date for it.

To the same period, viz. second century B.C., may be ascribed the inscription (below, p. 76 and pl. LII C) on a loose boulder lying in front of Cave 5, from which, evidently, it got detached. Cave 5 may, therefore, claim an equal antiquity.

Caves 6 to 9, including 6A, were the result of the westward extension of the rock-excavation activity. Of them, Caves 6 and 7 have some common features, viz. the astylar hall, vaulted roof with sockets for wooden attachments in some cells and stepped merlons on the architrave and brackets, which may possibly indicate for them a date somewhat later than the preceding ones. Cave 9, with a berm with the *vedikā*-pattern on the architrave, may be ascribed to the first century B.C.

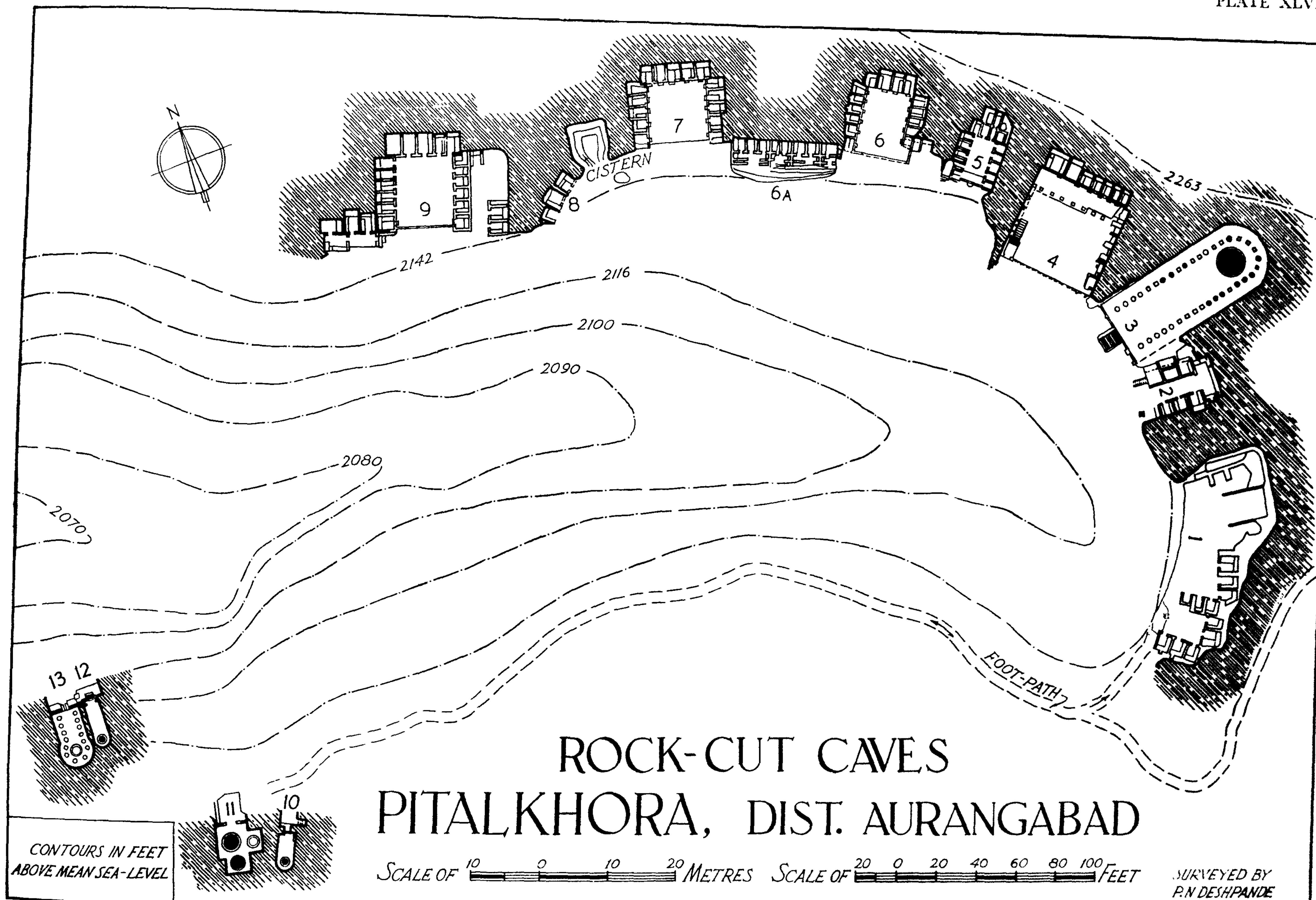
Caves 10 and 11 of Group II (below, p. 78) may be assigned to the first-second century A.D. on the basis of the developed shape of the *stūpas* and architectural details therein. Caves 12 and 13, lacking these features, should belong to an earlier period, say the first century B.C.

The sculptures, both *in situ* and recovered loose from the débris, all belong, as stated above, to this first phase of the occupation of the caves, covering the first two centuries before and after Christ. The setting up of detached (as distinct from rock-engraved) sculptures on the façades of the caves (e.g. Cave 4, p. 73), and Cave 13 (p. 79), to make good the worn-out rock-surfaces, generally took place later than the excavation of the caves themselves.

The series of sculptures starts, stylistically, with those characterized by an archaic naïveté (e.g. Gaja-Lakshmī, p. 80 and pl. LV A, and *yakshas*, pp. 81-83 and pls. LVI and LVII), which form the earliest sculptures in western India, and gradually gathers

[1] Unfortunately, no detailed palaeographical examination of any painted record of the second phase of the western Indian caves, including Ajanta, has as yet been undertaken.

PLATE XLVI


ROCK-CUT CAVES
PITALKHORA, DIST. AURANGABAD
N
CISTERN
9
8
7
6
6A
5
4
3
2
1
13 12
11
10
2263
2142
2116
2100
2090
2080
2070
FOOT-PATH
CONTOURS IN FEET ABOVE MEAN SEA-LEVEL
SCALE OF 10 0 10 20 METRES
SCALE OF 20 0 20 40 60 80 100 FEET
SURVEYED BY P.N DESHPANDE

elaboration and sophistication (e.g. seated female figure, p. 76 and pl. LIII A), till it reaches a full development that is almost comparable with that of Amaravati (e.g. royal couple, p. 87 and pl. LXIII A).

The discovery of the sprinkler of the Red Polished Ware, regarded as of Samian origin (below, p. 90), is of an uncertain dating value, first, as the vessels of this type were found in the midst of débris, and, secondly, the type and the Ware were imitated locally and were current at many sites till much later times.

4. THE CAVES

The caves (pl. XLVI) are situated on both sides of a deep ravine cut into the rock by a hill-stream plunging down a precipice. To reach the main group (which was known to Wilson and Fergusson and Burgess, above, p. 67), called here Group I, one has to cross the stream. The newly-discovered caves, constituting Group II, are excavated on the other side of the ravine. The two groups thus face each other, the first cave (Cave 10) of Group II almost facing the last cave (Cave 9) of Group I. The caves have been serially numbered here, Caves 1 to 9 (including 6A) constituting Group I (pl. XLVIII A) and Caves 10 to 12 Group II.

A. Group I

(i) *Cave 1*

Cave 1 has undergone much damage and now appears almost like a huge natural opening, but the extant remains of some of the living-cells, mortise-holes for wooden door-jambs and benches to serve as beds indicate that this gaping cavern represents the ruins of two or more rock-cut *vihāras*. One such *vihāra* lay in the south-west end and had two cells in the back and three on the right side, each with a rock-cut bench. In the wide portion also there are indications of cells, but it is difficult to determine their number. The rock into which the cave was excavated has, at a height of 4 ft. from the floor-level, a very loose stratum of red bole, which in course of time weathered, thus causing the disappearance of the thin partition-walls which originally demarcated the caves from one another and otherwise contributing to the decay of the caves.

(ii) *Cave 2*

The recent clearance of the forecourt revealed a flight of eleven steps leading from it to Cave 2, the forecourt being shared by this cave and the adjoining caves, Caves 3 and 4; the three caves are thus contemporary with one another. The wall dividing caves 2 and 3 has completely disappeared owing to the disintegration of the rock. The extant remains of Cave 2, a *vihāra*, consist of a series of four cells on the right side, each provided with one or two raised benches, a long bench at the back and the damaged remains of two cells on the left. An important feature is a rock-cut drain with loose covering slabs: it drained out water which would have otherwise flowed into Cave 3 but was very ingeniously diverted through a wide aperture by boring a hole into the ceiling of its vaulted roof. This effective method of dealing with leakages in rock-cut monuments is a good example of ancient conservation.

(iii) *Cave 3*

Cave 3, a *chaitya*-cave, though described in the past by Fergusson and Burgess,[1] is again dealt with here, as it has been noticed that their description is not accurate in essential details, probably owing to the fact that the frontage of the cave and the extant stumps of pillars were not previously exposed. The complete clearance of the cave has revealed that it is 35 ft. wide and 86 ft. long with an apsidal end. Originally there were in all thirtyseven octagonal rock-cut pillars separating the aisle from the hall. Of them, the front five of the right side and four of the left are missing, except for their traces on the ground. Of the rest, sixteen were reconstructed in the recent past by the former Hyderabad State as rectangular masonry pillars and the remaining twelve stand almost intact in their original form and even retain remnants of paintings of *circa* sixth century, as also two early inscriptions contemporaneous with the excavation of the cave.[2] The inscriptions, on the tenth and eleventh pillars from outside on the right, record that one was a gift of Mitadeva of the Gādhika (perfumers'?) family and the other of the sons of Saṁghaka, both hailing from Patiṭhāna (Pratishṭhāna, Paithan).

All the pillars have a slight inward rake and are similar to those of the *chaitya* at Bhaja and Cave 10 at Ajanta. The aisles are 4 ft. 11 in. wide and have stone ribs on the ceiling, which is like a half-arch. The vault of the nave was once provided with wooden ribs, as in the *chaityas* of Bhaja and Karla; though all woodwork has now completely perished, their positions can still be marked (pl. XLVIII C). The square spaces between the wooden ribs were once decorated with paintings on plaster, of which a few traces of panels with lotuses exist.

The paintings on the pillars (pl. XLVII) and side-walls call for a special study. It may only be noted here that all the extant pillars bear paintings of Buddhas and the Bodhisattvas. A noticeable fact about the paintings on the walls is that the original wall-surface, which had badly weathered due to the disintegration of the layer of bole (above, p. 71), was repaired with closely-jointed stone slabs and given a coat of plaster when the paintings were executed during the second phase of the cave. This is another example of ancient conservation.

The *stūpa*, owing to the friable nature of the rock, had to be partly structural and partly rock-cut; in its present state it is bereft of the *aṇḍa*, which was of masonry. Its circumference at the base is 36 ft.

Through sheer luck, crystal reliquaries were discovered within the *stūpa* (pl. LXIII B, *1*, *4* and *5*). They were contained in oblong sockets specially chiselled in the back side of the drum of the *stūpa* and plugged by close-fitting stone slabs after the deposit of the relics inside: one socket, 6 in. × 4 in. × 5 in., was without any plug. The second socket, 2 in. × 2 in. × 2½ in., close to the first and 4½ in. above the base of the drum, yielded a ring-like object (pl. LXIII B, *6*). The next socket, 3 in. × 4 in. × 7 in., occurred 2 ft. 6 in. away from the second, at a height of 2 ft., and yielded the largest of the *stūpa*-shaped reliquaries (pl. LXIII B, *1*). The fourth socket, 1 ft. 4 in. above the ground-level and 2 in. × 3 in. × 3½ in. in dimensions, also contained two *stūpa*-shaped reliquaries (pl. LXIII B, *4* and *5*). It was further observed that on the left face of the *stūpa* there was a socket, 1 ft. 1 in. × 4½ in. × 2½ in., without the plugging slab. Further, on the top of the drum, over which the masonry *aṇḍa* had been placed, was a rock-cut chamber, 1 ft. 10 in. × 1 ft. 3 in. × 1 ft. 4 in., with an interior flange, at a depth of 4 in., to keep in position the covering slab. This chamber might have contained the principal relics over which the *stūpa* had been raised.

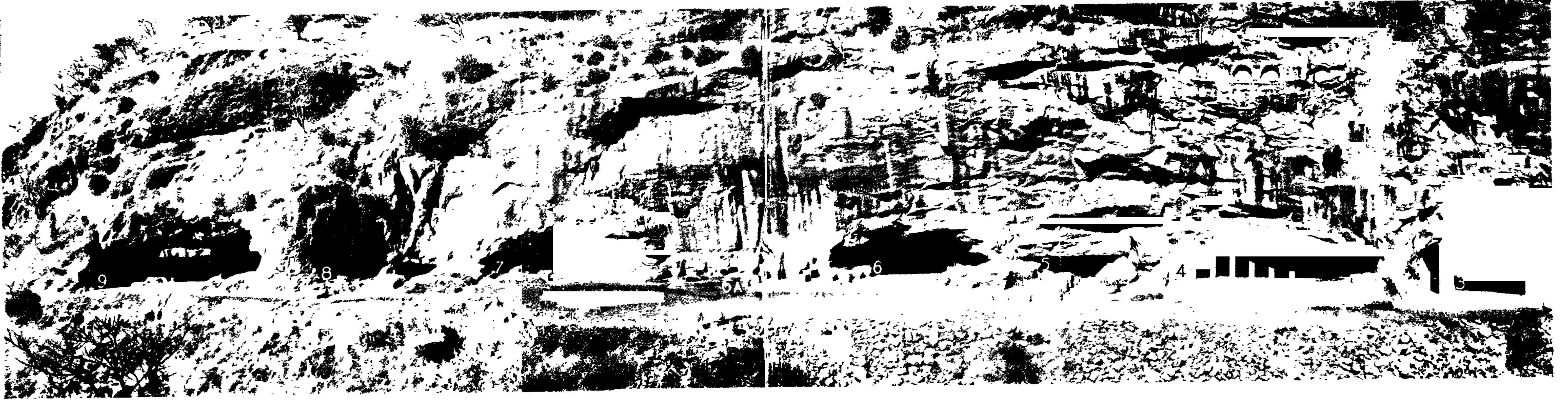
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[1] Fergusson and Burgess, *op. cit.*

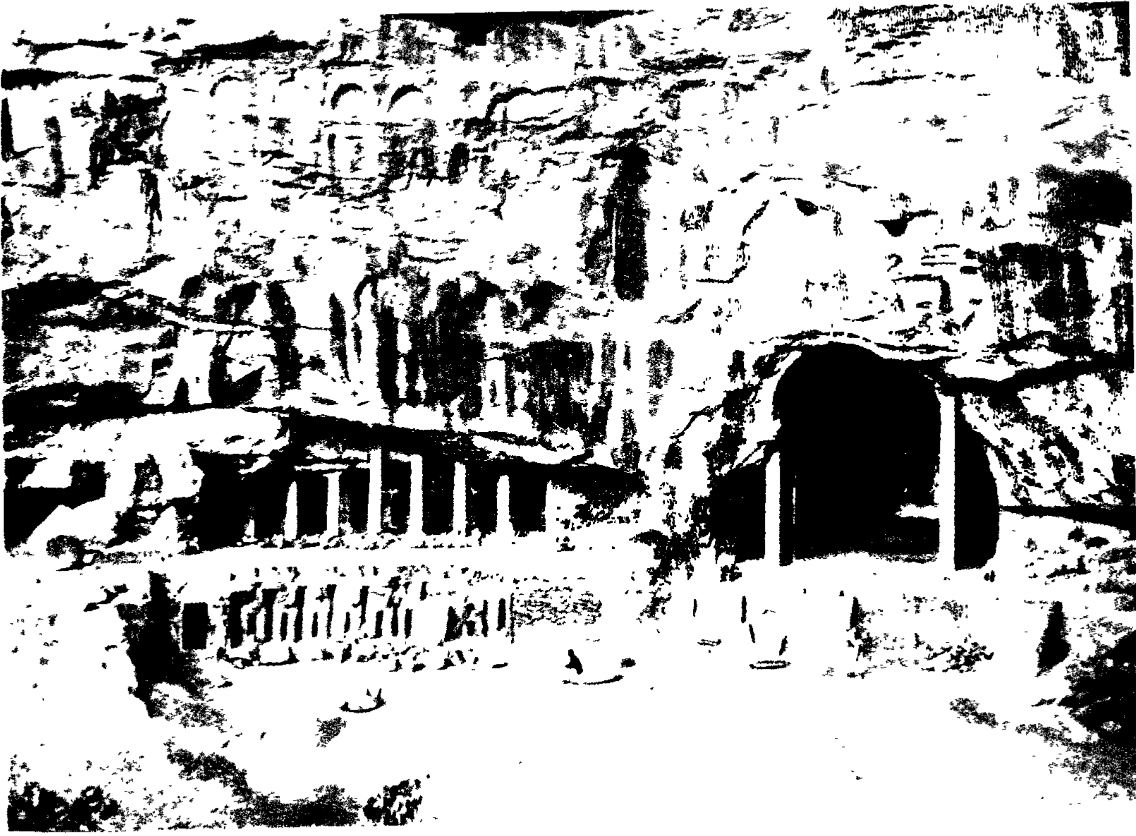
[2] Burgess, *op. cit.*, pp. 83-84; Lüders, *op. cit.*, nos. 1187 and 1188.



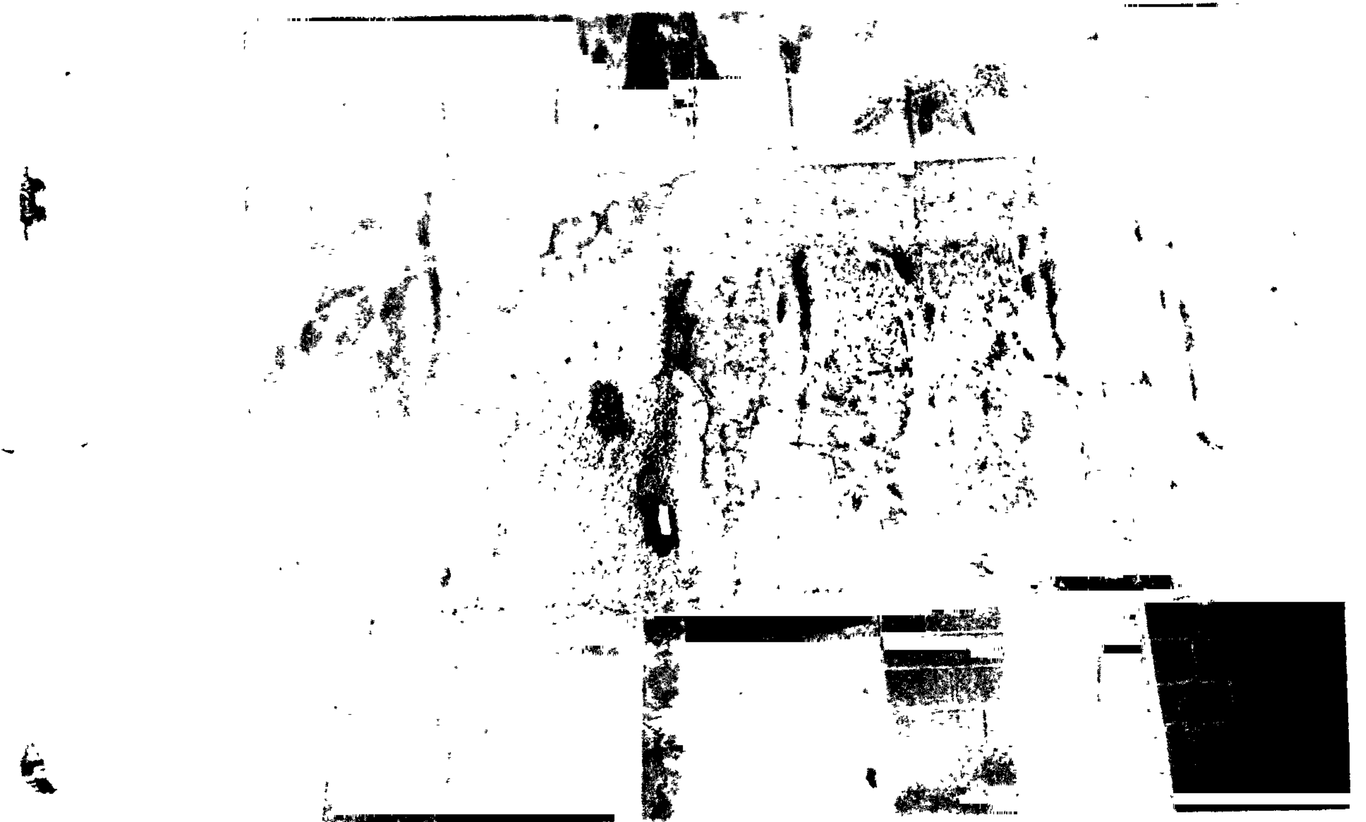
Cave 3, paintings on pillars. *See p. 72*



A. *Panoramic view of Caves 3 to 9.* *See p. 71*



B. *Caves 3 and 4, after clearance of forecourt.* *See p. 74*



C. *Cave 3, grooves in ceiling for holding woodwork.* *See p. 72*



A. *Cave 3, sculptured panel on southern side of steps. See p. 73*



B. *Cave 4, part of façade of back cells. See p. 73*

To face p. 73

The rock-cut *stūpa* in the *chaitya*-cave at Bhaja, it is observed, has similar sockets, which, unfortunately, are bereft of their plugging slabs and consequently of relics. The positions of the sockets are, however, almost identical with those of the Pitalkhora *stūpa.* It appears, therefore, that the practice of depositing reliquaries in rock-cut *stūpas*, in the manner described above, was in vogue when the caves were excavated.

Another feature that came to light is a flight of eleven steps, the lower five being on a broader basement. On the rock-surface on each side of the steps is a sculptured panel in low relief depicting a prancing winged horse in the corner of the shorter side of the rhombus and two *yakshas* with their hands over their head, as if supporting the balustrade (pl. XLIX A). Both are dwarfish and pot-bellied and have wrinkled foreheads, bulging eyes and broad and flat noses; their humorous character is obvious. The larger one, to the right, has his mouth closed and cheeks wrinkled; he wears a *karṇa-veshṭana* on the lobe of the visible right ear, the upper part of which is that of an animal (*śaṅku-karṇa*). The smaller *yaksha*, to the left, has a smiling countenance, his teeth visible through the parted lips; like the first, he too has the *śaṅku-karṇa.* The sculptured panel on the left flank of the steps is not well-preserved.

These *yakshas* appear to precede in time their massive counterparts in front of Cave 3 of Nasik and bear a family-resemblance to the pot-bellied *rākshasas* in the *vihāra*-cave of Bhaja.

On the lower basement on each side of the steps there is a small round cavity, 1 ft. 3 in. in diameter and 7 in. in depth, where probably loose images were fixed. The plinth, 6 ft. 7 in. higher than the level of the forecourt, is otherwise plain except for the soft rounded mouldings at the level of the upper flight of steps. The basement projects forward on either side, and there are two pilasters over the broader rock-cut basement: where the rock was poor, the pilasters were made in masonry. On either side of the entrance was probably a low *vedikā*, as can be seen from the remnants of cross-bars of the *vedikā*-pattern and from the cavities on the door-jambs of the entrance.

(iv) *Cave 4*

Cave 4, the great *vihāra*, was once adorned with a magnificent sculptured façade, which, except for the traces of sculptures and *chaitya*-window ornamentation at its top, is now damaged owing to the breaking off of huge blocks of rock at vulnerable points in this rather poor quality of trap full of seams and fissures. Of the remnants of the façade a row of six *chaitya*-windows with the interior decorated with a recessed window-pattern and animal figures between the semicircular rock-cut *vedikā*-pattern is seen. Below this is the sculpture of a *mithuna.*

The features of this cave, including the sculptures on the pilasters of the back cells, have been described by Fergusson and Burgess,[1] who have also dealt at length with the winged sphinx- and animal-capitals and decorations on the *chaitya*-window arches over the doorways of the cells (pl. XLIX B). In this connexion, it may be recalled that sculptures of winged horses also appear by the steps of cave 3 (see above.)

The cave consists of a series of seven cells in the back with a verandah in front, most of the pillars of which have been recently reconstructed in masonry. It appears that there were two more rows of pillars, of masonry, supporting the roof of the *vihāra*, but they have now perished, leaving square incisions on the floor to indicate their positions.

[1] Fergusson and Burgess, *op. cit.*, pp. 244-46.

The collapse of the façade has marred the view of what had at one time been a magnificent entrance, and the consequent accumulation of débris in the forecourt misled people to think that the steps in front belonged to an underground passage leading to the stream. The clearance of the débris (pl. XLVIII B), however, has brought to light a high plinth with a splendid series of elephants carved on its edge and a very ornate entrance on the extreme left, flanked by *dvāra-pālas* holding javelins and shields in hand. The sculptures of the elephants, half projecting forward with the sculptured mahouts standing in front, and other sculptures recovered from the débris constitute a priceless treasure of early art. The detached sculptures are dealt with below (pp. 80-88); only those which even now form part of the rock-cut *vihāra* are described here.

A feature which needs special mention is the very ingenious arrangement of diverting water that found its way into the cave through cracks: long tunnel-like openings were bored into the ceiling and the water was allowed to flow fully into the cave, in the floor of which a channel was cut to lead the water outside near the entrance. There are two such openings in the ceiling of this cave, one on the right side of the back cell and the other in the right side cell.

The stepped entrance to the cave, located at the left end of the forecourt, leads to the floor of the *vihāra* by a flight of eleven steps. The plinth of the *vihāra*, as stated above, has a series of nine elephants ending with an almost life-size horse in profile with a male figure in front and a *chowrī*-bearer behind (pl. L). The elephants are damaged, tneir heads and trunks lying in the foreground.

The elephants (pl. L A), with their massive and rather stiff forelegs, are shown as stepping forward out of a shelf cut below the floor of the cave and appear to bear the weight of the cave. Pearl ornaments and pendants hang down from the upper ear-lobes and at the lower ends are suspended bells resting on the trappings. In place of tusks, there are holes, probably to receive detachable decorated ivory or wooden tusks, though in some cases the tusks are carved in stone itself and have floral wreaths attached. On their necks are ornaments like clustered strings.

Between the forelegs and trunk of each elephant is its mahout, with an *aṅkuśa*, turned half-right, so that the trunk of the respective elephant hides the left shoulder of the mahout. Two such detached sculptures are described below (p. 85).

The elephant-sculptures have their prototype in their Mauryan counterpart at Dhauli in Orissa, and appear to have influenced the later artists; the magnificent series of elephants and *vyālas* on the plinth of the great Kailāsa (eighth century) and Indrasabhā (ninth-tenth century) at Ellora might owe their inspiration to them. They have also a family-resemblance to the mighty elephants carved in the *chaitya*-cave at Karla, District Poona (first century A.D.), the only difference being that the mahouts at Karla are shown riding on the elephants. Another typologically and chronologically comparable example comes from Ceylon, where the immense platform of the Ruanweli *dagoba* at Anuradhapura is made to appear as if it is supported by a row of elephants on all the four sides of the basement. 'These elephants form the retaining wall; they were modelled in brickwork and placed less than two feet apart; only their heads and fore legs appear; their height is above nine feet'.[1] It is stated that they were coated with durable lime-plaster and the holes in the jaws where the tusks were inserted are still visible. There are also traces of ornamental trappings which were executed in bold relief. This *dagoba* is attributed to the times of Dutta-Gāmanī (101-77 B.C.).[2] It will, therefore, appear that the tradition of

[1] H. W. Cane, *The Book of Ceylon* (London, 1912), p. 553 and pl. 676.
[2] A. K. Coomaraswamy, *History of Indian and Indonesian Art* (London, 1927), p. 158.

depicting elephants carved on plinths of monuments is of great antiquity and later on resulted in the splendid rows of *gaja-tharas* met with in medieval temples.

The entrance-doorway (pl. LI A), 5 ft. 4 in. × 2 ft. 6 in., has its jambs ornamented with beautiful designs of half-lotuses and the *tri-ratna*.[1] Just behind the jambs are circular sockets for fixing wooden door-leaves. On each side in front stands a very dignified *dvāra-pāla*, clad in a *dhoti* and a close-fitting tunic and holding a javelin in one hand and a shield in the other. The shields are oblong in shape and their ends are decorated with tassels and small bells; they remind one of their counterparts in the frieze in Cave 1 (Rānīnūr) of Udayagiri[2] in Orissa (first century B.C.). Both the *dvāra-pālas* hold javelins in their hands, the right one in his right hand and the left one in his left. The right *dvāra-pāla* has a short dagger in a broad scabbard attached to his belt, which is seen just behind the shield; the left one has a sword tied to his *chhanna-vīra*, its hilt between his waist and left hand. Both the sculptures are remarkable for their very realistic modelling, the depiction of garments and a smiling expression, which nevertheless bespeaks strength and vigour. Their faces show bulging and fleshy cheeks, thick lips and wide-open eyes. The ponderous chests, the heavy and muscular arms and the firm standing pose give the figures the perfect demeanour of an alert sentinel. Their head-dress, formed by the knot of the turban decorated with pearl-stringed *mālās*, reminds one of similar head-dresses depicted at Sanchi and later on at Amaravati. Both of them have heavy *karṇa-veshṭanas*, a close-fitting *mālā* round the neck and a cross-belt over the tunic, which is kept in position by the two broad bends, one just below the other, round the waist. Below the tunic is the undergarment ending in a triangular leaf-shaped frill, reminiscent of similar drapery at Bhaja and Bharhut. The *keyūras* entwining the arms are simple and round in section, but the wristlets are highly decorated and appear to be studded with beads.

Over the head of each *dvāra-pāla* is an elephant in profile, the trunk missing. Over the left elephant is the damaged sculpture of a *kinnara*. Set within these two elephants and above the doorway was an oblong panel of Gaja-Lakshmī (below, p. 80 and pl. LV A), now fallen from its original place.

On the left wall, projecting forward beyond the left end of the courtyard, is a five-hooded cobra in low relief (pl. LI B). In the hoods are bored holes, from which water from the rock-cut channel described above (p. 74) probably oozed out, as can be guessed from the water-marks on the sculpture. Just above the sculpture is a rock-cut socket, filled with a close-fitting block, probably meant to regulate the flow of water through the holes.[3]

As stated above (p. 74), beyond the elephants on the right side is an almost life-size sculpture of a horse with a figure of a male in front and a *chowrī*-bearer behind (pl. L B). This unique sculpture, with an inscribed record giving the name of the donor over it, was once hidden by a rubble wall, erected to support the overhanging portion of the rock which had disintegrated and was threatening to collapse. It is quite likely that this ugly but compulsory conservation was effected during the second phase of the caves. The horse may perhaps depict the event of the Great Departure, on the analogy of a comparable sculpture (below, p. 80), about the identification of which with that event there is no doubt.

[1] The jamb of the entrance-doorway of the Nasik *chaitya*-cave has a similar decoration. Besides, the entrance of this *chaitya* is also flanked by *yakshas* and appears to have copied the earlier model provided by Pitalkhora.

[2] Fergusson and Burgess, *op. cit.*, pl. I.

[3] A similar sculpture of a *nāga* appears close to the water-cistern attached to the *vihāra* at Kondivte. The depiction of *nāga* near a water-cistern and its peculiar representation at Pitalkhora are worthy of special attention.

The projection to the right of the horse-sculpture depicts a female figure seated on a raised pedestal (pl. LIII A). The sculpture is broken above the waist. The lower portion clearly shows that she is seated in *savya-lalitāsana* under an umbrella held over her head by an attendant, who stood half concealed behind the seat but is now completely missing except for his left foot with the anklet showing itself by the side of the platform on which the main figure is carved. The very graceful manner in which the right foot, with anklets, of the main figure rests on the *pāda-pīṭha* makes one feel that this sculpture, when complete, must have been one of great artistic beauty. The *sārī* is shown with beautiful folds, one of its ends hanging down from below the left foot over the pedestal. From the modelling of the slender waist and the foot and the manner in which the folds of the garment are carved, one feels that the sculpture belongs to the first century B.C.

The cave is also important on account of its inscriptions. The ones previously known[1] are engraved on the opening of each cell. The donors are in all cases members of the family of the royal physician. The ones now discovered are mentioned below.

The indistinct inscription (pl. LII A) above the horse consists of two lines, of which the upper one is badly damaged. It reads as follows:

Line 1 *[Dhe]nuk[āka]tasa Samasa-putena Ka-*
Line 2 *ṇhena kata*

'Done by Kaṇha (Kṛishṇa), the son of Samasa, of Dhenukākata'.

This Kaṇha may be the same Kaṇha, the *hiraṇya-kāra*, who was responsible for the inscribed image of *yaksha* at the place (below, p. 81). Dhenukākata of this inscription also finds mention in a number of inscriptions from Karla and one each from Shelarwadi and Kanheri,[2] of all of which Pitalkhora is the northernmost. The identification of the town[3] is not yet established, but one may have to search for it in the Māmala country or near Kalyan somewhere on the ancient trade-route connecting the Bor Ghat with Sopara. On palaeographical grounds, the inscription can be ascribed to the second-first century B.C.

The next inscription (pl. LII B), carved on a pilaster in the left wall, reads.... *ya bhichhuniyā dāna[ṁ] tha[bho]*, 'the pillar (*is*) the gift of the nun....' The inscription may be ascribed to *circa* second century B.C.

The third inscription is on the adjoining pilaster in the left wall in line with the modern pillars. It is too fragmentary and the few discernible Brāhmī letters do not convey any meaning.

(v) *Cave 5*

Cave 5 is a *vihāra* but is so damaged that the prior existence of cells therein can only be guessed by a careful study of the vestiges of the entrance to cells, benches, etc. It appears that the *vihāra* had five cells on either side, each provided with a bench either at the back or on the side. On the back side there were four cells, the two in the centre being further deepened to provide two additional cells. An interesting feature of the cave is a slightly projecting cell, 13 ft. 10 in. × 7 ft., on the left side with an apsidal, partly

[1] Burgess, *op. cit.*, p. 84.
[2] Lüders, *op. cit.*, nos. 1020, 1090, 1092, 1093, 1096, 1097 and 1121.
[3] Recently D. D. Kosambi has tried to identify Dhenukākata with Devagad or Devghar situated on the opposite tip of the horseshoe curve of the hills of Karla, *Jour. Asiatic Soc. Bombay*, XXX, pt. ii (1955), p. 59.



A. *Cave 4, row of elephants on plinth.* *See p. 74*



B. *Cave 4, sculptured panel in continuation of row of elephants on plinth.* *See pp. 74 and 77*

To face p. 76



A. *Cave 4, entrance-doorway.* *See p. 75*



B. *Cave 4, cobra with holes bored through its hoods and dvārapāla to left of entrance-doorway.* *See p. 75*



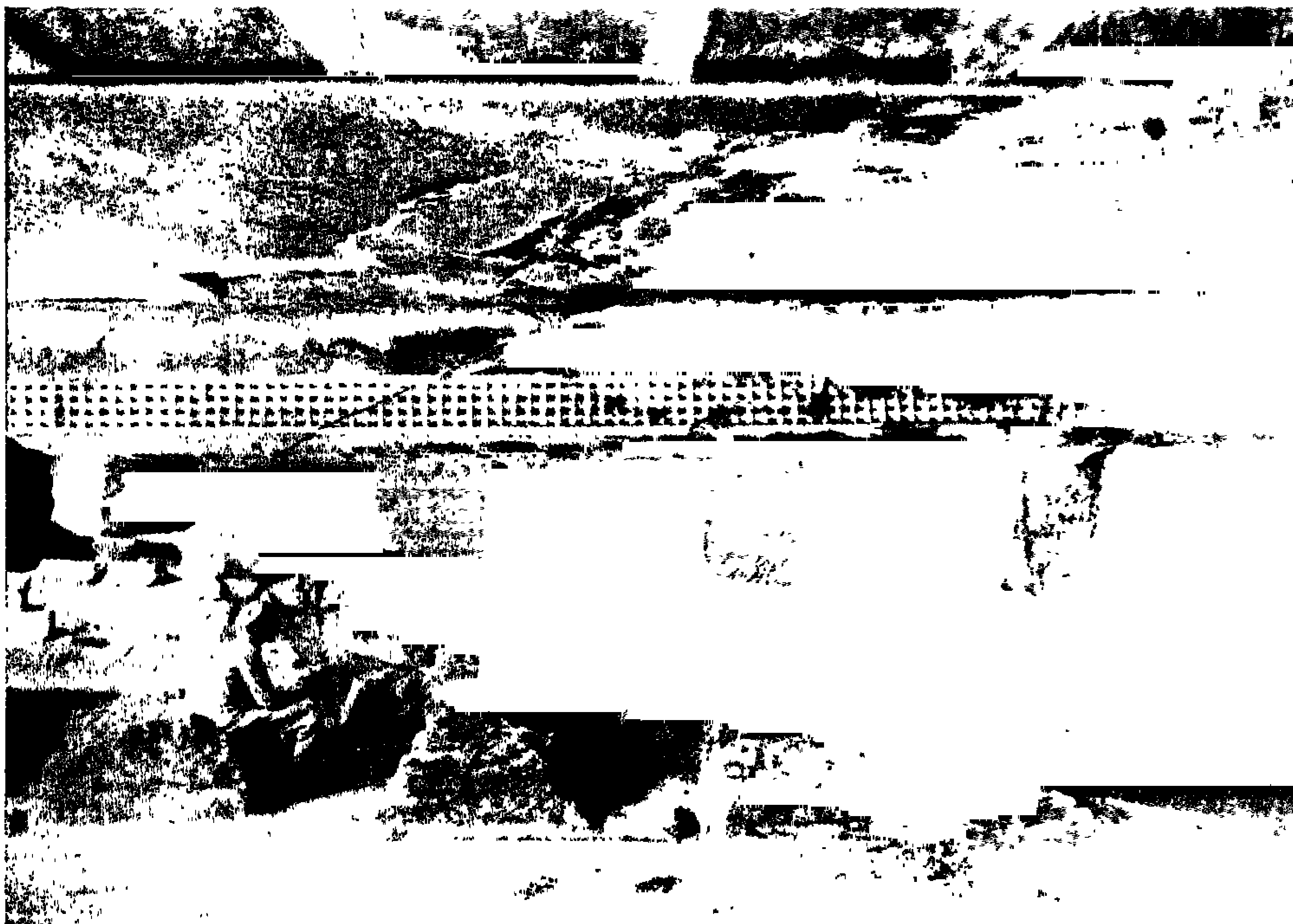
Brāhmī inscriptions: A *and* B, *in Cave* 4; C, *on loose boulder in front of Cave* 3; *and* D, *on outer right palm of yaksha image recovered from débris in front of Cave* 3. *Scale* $\frac{1}{2}$. *See pp.* 76, 77 *and* 82



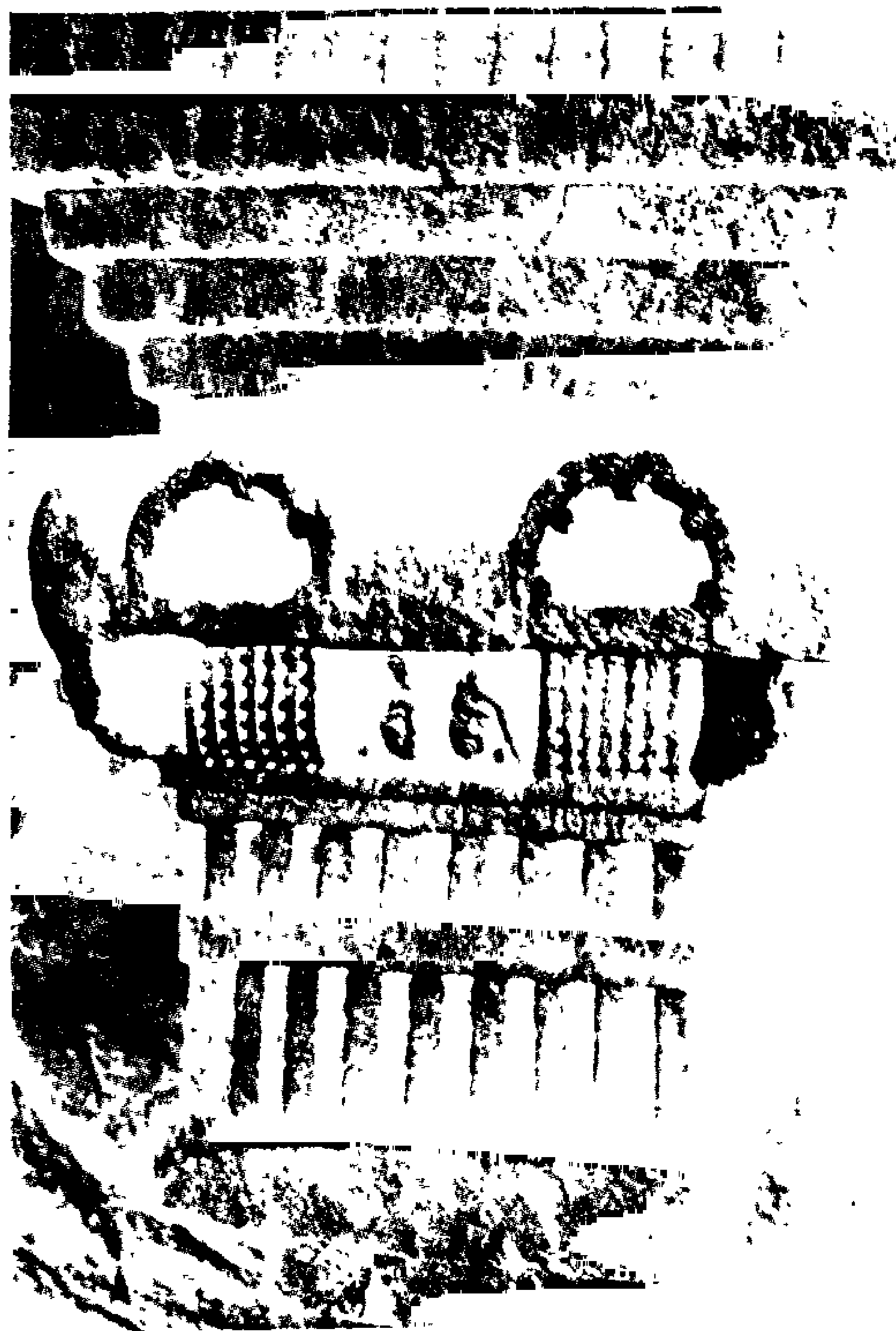
A. *Cave 4, female figure to right of horse-panel on plinth.* See p. 76



B. *Cave 6, brackets and pyramidal pattern on rear wall of back cells.* See p. 77



A. *Cave 9, view of side cells.* *See p. 78*



B. *Cave 12, loose harmikā.* *See p. 79*



A. *Gaja-Lakshmī panel, from débris near entrance of Cave 4.* *See pp. 75 and 80*



B. *Great Departure panel, from débris in forecourt of Cave 4.* *See p. 80*

structural, end, and one wonders whether the cell was a *chaitya* with a structural *stūpa* at the apsidal end. It has near the entrance a short bench on one side and two steps, of which the lower one is semicircular at the left end.

The cave has a small verandah with oblong projecting steps. The sockets carved on the plinth indicate the prior existence of masonry pillars.

In front of the cave is a huge loose boulder on which is carved the inscription.... *ya aṭhīseniyā* (pl. LII C); it seems to record the gift of a guild of bankers and is thus important in throwing light on the economic structure of the contemporary society. The inscription is ascribable on palaeographical grounds to the second century B.C.

(vi) *Cave 6*

This cave, also a *vihāra*, had probably fifteen cells, of which those on the left and back sides are slightly better preserved than the rest. The brackets and the pyramidal pattern over the architrave of the rear walls of the back cells are interesting (pl. LIII B), as has already been noted by Dikshit.[1] Each cell has a door-step. At the entrance to the *vihāra* there appears to have been at a slightly lower level a small verandah, the inner side of which was anciently repaired by burnt bricks, each measuring 16 in. × 8 in. × $2\frac{3}{4}$ in. In some of the walls of cells was cut a small oblong niche.

Patches of old plaster, of cow-dung, husk, etc., with traces of paint on them, are still visible on the walls and ceiling.

(vii) *Cave 6A*

Cave 6A consists of the damaged remains of eight cells in one row in four groups: it was thus a *vihāra*. The partition-walls between the cells and the entire roof are altogether missing. In the back wall are oblong niches.

(viii) *Cave 7*

Cave 7 is a *vihāra* with fifteen cells, five on each of the sides except the front, and an unpillared hall in the middle. All the cells have entrance-steps. There are brackets supporting the ceiling over the back side-bench in one of the cells in the back wall; the adjoining cell to the left is connected with it by a doorway cut through the middle bench. The pyramidal merlons on the architrave on the back wall above the bracket are similar to those in Cave 6. The ceiling of the cell is vaulted and has grooves for wooden ribs. Traces of old plaster and paint are seen on the ceiling.

Between this and Cave 8 is an unfinished rock-cut cistern.

(ix) *Cave 8*

Close to the cistern are three cells with benches, constituting Cave 8, a small *viharā*.

[1] Dikshit, *op. cit.*

(x) *Cave 9*

Cave 9, with extensions on both sides, is a large *vihāra* with some interesting features. Its façade was originally supported on four pillars and two pilasters leading into a verandah, 26 ft. long and 5 ft. 9 in. wide, with a cell at each end. There appears to have been a central doorway, the remnants of the walls of which exist on both sides leading from the verandah to the main hall. Inside the hall, on three sides, are five cells, each with a bench. The partition-walls between the cells are missing. There is a very fine berm with the *vedikā*-pattern on the architrave running all round the wall-surface above the cell-doors (pl. LIV A). From the usual indications, the cave appears to have been plastered and painted.

At the eastern end of the cave is another small *vihāra* with three cells, on the western side of which are the remains of a still another *vihāra* with four or five cells.

B. Group II

(i) *Cave 10*

Cave 10 has a small forecourt, 12 ft. × 8 ft., with a projecting rock on either side. Looking at the façade, one notices a roughly-hewn doorway, 5 ft. 6 in. × 2 ft. 8 in., in the front wall, which is 3 ft. 10 in. thick. Above the entrance is a semicircular niche, 9 ft. wide at the base, 6 ft. 9 in. high and 2 ft. 8 in. deep, with a window-opening, 3 ft. 4 in. × 1 ft. 6 in. Careful observation reveals that the arch of the niche had stone ribs.

The cave itself is a pillarless apsidal hall, 17 ft. 7 in. deep and 8 ft. 4 in. wide, with a height of 12 ft. 7 in. The height of the *stūpa*, its *harmikā* broken, is 6 ft. 6 in and its circumference at the base is 17 ft. 9 in. It tapers upwards, and at the junction of the drum and the *aṇḍa* there is a 7½ in. broad band of the *vedikā*. Above it is a short offset of 3 in., and still above is a rather squat *aṇḍa* with a circumference of 11 ft. 8 in. There are two holes on the opposite side-walls, which were probably meant to hold a horizontal bar from which offerings or lamps were hung.

The side-walls of the hall slightly taper upwards, and there is indication that the cave was not finished. The *harmikā* is damaged but may perhaps have contained some relics.

(ii) *Cave 11*

Cave 11, with a damaged façade, contains three rock-cut *stūpas*, probably excavated in different periods. The cave had probably a dwarf-wall, through which there was an entrance-opening, about 4 ft. 10 in. wide. Two of the *stūpas* stand in a dilapidated condition, but the third and innermost one is fairly intact. The *stūpa* in the front chamber, measuring 15 ft. 6 in. × 15 ft., has, in spite of its damaged condition, its *harmikā* still in position over the extant part of the *aṇḍa*.

Behind this cave is a cell, 7 ft. 10 in. deep and 11 ft. 9 in. wide, containing a *stūpa* with its *harmikā* and a carved *chhattra* on the ceiling. In the back portion of the *aṇḍa* are two holes, excavated in the tapering portion of the *aṇḍa* just behind the *harmikā*; they might have been the chambers for relics. One of them is oblong and the other circular. The former has a ledge, 1 in. below the top, to receive a cover.

There is yet another *stūpa* to the east of the first *stūpa* in a separate oblong excavation, 9 ft. 11 in. × 7 ft. 3 in. This is also damaged, but the *chhattra*, carved on the ceiling, is extant.

(iii) *Cave 12*

Sharing a common forecourt, the last two caves, Caves 12 and 13, are both *chaityas*. The forecourt in front of Cave 12 is 11 ft. wide and has three steps, each 4 ft. 7 in. wide, with an easy rise. The cave had originally a narrow entrance, but with the fall of the entire façade it is difficult to say how the door-frame was fixed. To the right side of the entrance are the remains of a sculpture indicated only by the remnants of the feet marking the existence of a *dvāra-pāla* figure. Entering inside, one notices a very narrow verandah, 1 ft. 9 in. wide, along the entire width of the cell, formed by an 11 in. wide pilaster-like projection. Careful observation reveals that this pilaster must have supported the *chaitya*-window over the doorway.

The *chaitya*-hall is without pillars and is apsidal on plan, with a total depth of 21 ft. 8 in., the width and height being 7 ft. 6 in. and 15 ft. respectively. The *stūpa* in the apsidal end is damaged; there is an oblong socket over the *aṇḍa* for receiving the stem of the loose *harmikā* (pl. LIV B), which had originally been there but slipped down with the disintegration of the *aṇḍa* and is now kept in the cave. Starting with the base, it has a box-like chamber covered by the *vedikā*-pattern in two compartments, over which, in the centre of all the four sides, are carved the heads of a male and a female. In the corners are bracket-figures holding the upper rectangular portion, on each side of which there are two *chaitya*-windows. Over this is a rectangular block broadening up in four tiers. On the surface of the upper portion is again a sunk *vedikā*. The *mithuna* sculpture over the *harmikā* is unique, nowhere met with in western India.

The vaulted ceiling of the *chaitya*-hall has rock-cut ribs, intersected by rock-cut rafters, which thus produce eight compartments between each two ribs. The ribs themselves are inverted U-shaped, have their ends slightly incurved and project about 7 in. from the surface of the vault. The five ribs in the apsidal end converge in the centre of the rearmost rib just above the apex of the *stūpa*.

(iv) *Cave 13*

Cave 13, very much damaged, was probably entered through an oblong entrance, about 3 ft. wide. The apsidal hall is 27 ft. 10 in. deep, 15 ft. wide and 15 ft. high. There are two rows of pillars in the hall going round the *stūpa* in the apsidal end, thus dividing the hall into a central nave and side-aisle, respectively 7 ft. and 1 ft. 11 in. wide. There were ten pillars in two rows in the front portion and four more in the apsidal end; all of them are, however, decayed and have only their stems intact. The stems are octagonal in shape; from the stem of one of them, which stands to a height of about 3 ft., it appears that it had a slight rake and was tapering towards the top.

The vaulted roof over the nave and the *stūpa* has stone ribs and rafters of the same type as in Cave 12. The roof of the side-aisle, however, is bereft of rafters and is like an arc. The *stūpa* is damaged except for a portion of the drum, which rises to a height of about 3 ft.

Outside the cave is a loose piece of rock bearing the sculpture of a galloping horse with a female rider having a javelin in hand. It appears that the sculpture was carved on the façade, which, like that of Cave 4, was decorated with sculptured friezes.

5. DETACHED SCULPTURES

A. Gaja-Lakshmī

The sculpture, recovered in a number of pieces from the débris in front of Cave 4, proved, on being joined together, to be one of Gaja-Lakshmī (pl. LV A), which must once have been set over the main entrance to that cave. It consists of the central figure of Lakshmī, seated on a half-lotus with seven petals, with the soles of her feet touching each other, and holding in both hands buds on stalks which issue out of the lotus-seat and, along with the head-dress, encircle the figures, thus adding to the beauty of the composition. The head-dress of the goddess is centrally parted and has a big bun at its middle top and a leaf-ornament at its base. Below the hair and almost framing the head is a wreath of flowers hanging down on the shoulders. The ear-ornaments (*karṇa-veshṭana*) also dangle down below the shoulders. In addition to a jewelled necklet (*graiveya*) on the neck, she has a beaded necklace going over the breasts and reaching farther down. Her wrists have heavy bracelets, three on each, and ankles wear anklets. Her slender waist has a waist-band and a broad girdle (*mekhalā*), holding in position the lower garment, the folds of which are seen near the ankles.

On either side of Lakshmī is an elephant, each with its raised trunk pouring the contents of a water-jar over the goddess. The elephants stand on lotuses with their feet drawn together. They have cloth trappings over them, the decorated end of which is seen on the left elephant.

B. The Great Departure

A squarish panel (pl. LV B), with its upper right corner broken, depicts in a graphic manner the Great Departure of prince Siddhārtha from his palace and is the only scene from the life of Buddha found at Pitalkhora. In the background is shown a palace-gateway (*toraṇa*) in front of which stands a richly-caparisoned horse, Kaṇṭhaka, in a majestic pose, with an attendant standing in the gateway and holding an umbrella over it. The horse is artistically decorated with trappings, horse-bits, etc. The beaded ornamental strings covering its chest with the tassels swinging with its movement bespeak the mastery of the

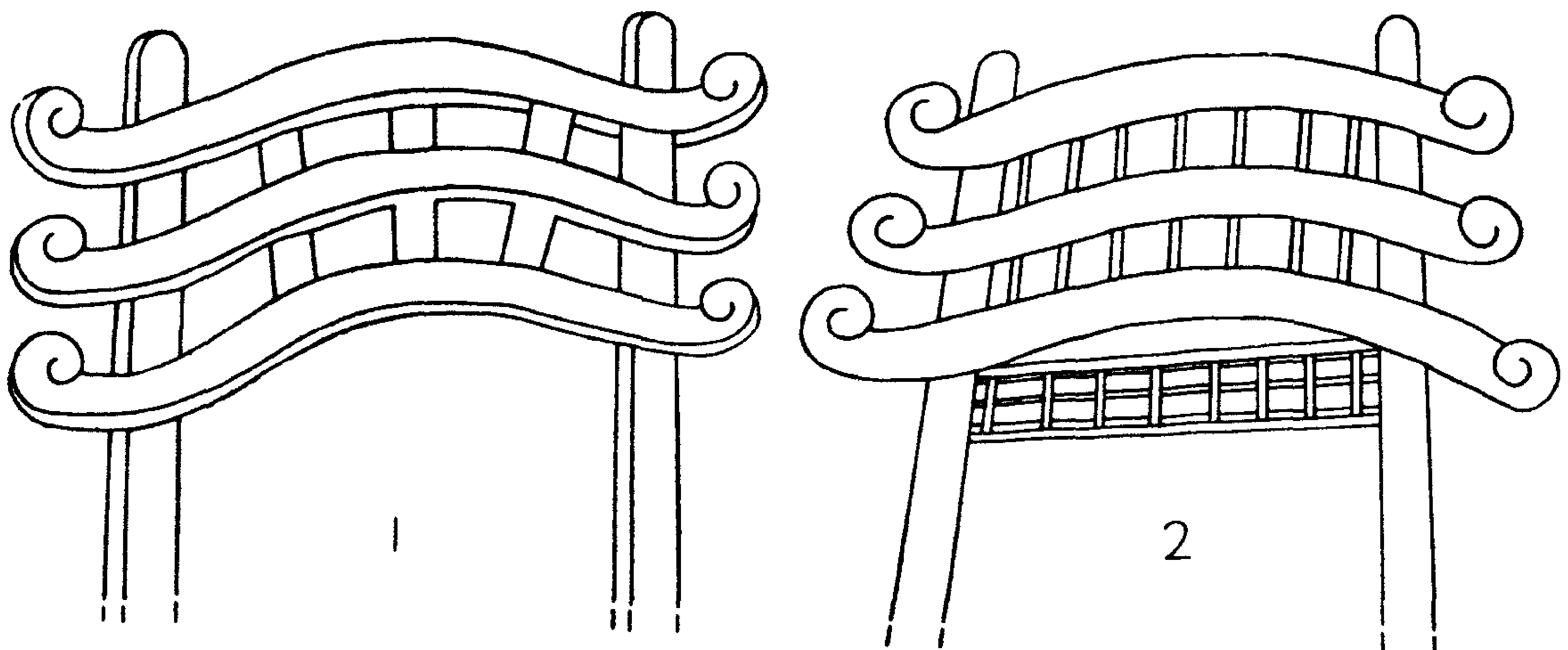


Fig. 2. *Toraṇa: 1, Ajanta paintings; 2, Pitalkhora sculpture. Not to scale*

PLATE LVI



Inscribed yaksha image, from débris in forecourt of Cave 3. See p. 81



A. *Dvārapāla yaksha, Cave 3.*
See p. 82



B. *Female door-keeper, Cave 4.*
See p. 83



C. *Yaksha and chauri-bearer, Cave 4.*
See p. 83



D. *Yakshī with casket on head, Cave 4.*
See p. 83

artist. On its back are richly-decorated trappings. Its manes are artistically shown, while its tail is slightly raised as would normally be when a horse is galloping.

In front of the horse is Chhandaka, acting here as the torch-bearer ready to move forward. He carries in his right hand a scabbard with the hilt resting on the shoulder. He wears a *dhotī*, the folds of which are nicely arranged and indicate his forward movement. His turban, though slightly damaged, is similar to that worn presently by the people in Maharashtra.

This sculpture is unique on account of the architectural details carved thereon. Under the raised band of the *vedikā* is carved a *toraṇa*, (fig. 2, *2*) the vertical jambs of which have a pronounced inward rake. The three arches have rounded and curled-up ends. Between the arches are vertical members dividing the space into eight compartments. Below the lowest arch is a low *vedikā*. It would be worth while to compare this *toraṇa* with the one depicted on an early painting in Cave 10 of Ajanta (second-first century B.C.) (fig. 2, *1*): in both the cases the inward rake is quite pronounced.

C. Yakshas

1. The first *yaksha* sculpture to be described here (pl. LVI) is a unique object. It is 3 ft. 6 in. high and is almost intact from the knees upwards except the missing left forearm. The sculpture represents a standing corpulent male *yaksha* with its hands raised upwards to hold a shallow bowl. The corpulence of the figure is emphasized by two fleshy rolls on the sides, and its dwarfish but bold and robust features give it a distinction of its own.

The front head-dress of the figure consists of two rows of hair twisted into rolls, which are increased on the back side to four with a knotted fillet dividing them into two parts. The expression of the face is full of wild joy resulting in a chuckle which exposes the teeth. The ear-lobes are perforated and are adorned with spiral ear-rings (*kuṇḍalas*), the upper parts of the ears imitating an animal (*śaṅku-karṇa*)— a traditional feature of the *yakshas*. The eyes are wide open with glee and the irises are clearly marked. Round the neck is a *graiveya*, but the most interesting feature is the string of gadrooned and collared beads (*maṇi-mālā*) with a large gadrooned central bead flanked by human-faced amulets, the cord of the string passing through the ears. The string is tied at the back in a knot and hangs down till it ends in another knot. The armlets (*keyūra*) entwining the short and muscular arm are three-plaited with hook-appendages at the end and, touching the ear-ornaments on the front, reach the back on the rear. The right wrist is adorned with circular three-coiled wristlets.

The sculpture is comparable with the squatting *yaksha* from Maholi, Mathura,[1] and more so with the *yakshas* on the western gateway of Sanchi.[2] In western India, similar figures in the round do not exist, though on the lion-pillar in front of the *chaitya*-cave at Kanheri are carved *yaksha* sculptures in half-relief.[3] On the plinth of Cave 3 at Nasik *yaksha* figures, also in half-relief, are shown as atlantes supporting the *vihāra*.[4] It is also noteworthy that the facial expression of this *yaksha* bears a striking resemblance with that

[1] V. S. Agarwala, *Handbook of the Sculptures in the Curzon Museum of Archaeology, Muttra* (Allahabad, 1939), p. 25 and fig. 21.

[2] J. Marshall, *The Monuments of Sanhi* (Calcutta, 1942), II, pls. LVII and LIX

[3] Percy Brown, *Indian Architecture, Hindu and Buddhist* (Bombay, 1956), p. 32.

[4] C. Sivaramamurti, *Sanskrit Literature and Art—Mirrors of Indian Culture*, Mem. Arch. Surv. Ind., no. 73 (Delhi, 1955), pl. 1 and fig. 3.

on the later dwarf *yaksha* from Ruanweli and Jetavanārāma *dagobas* in Ceylon, which are often compared with somewhat similar figures on the capitals of the western gateway of Sanchi.[1] The only sculpture on the left side of the *chaitya*-cave at Kondane, District Kolaba, can now be identified as a figure of *yaksha*, which has a *śaṅku-karṇa* as the present one.[2] From the size of the head, it is surmised that it was almost twice life-size and when complete must have been a colossal image.

Of all the sculptures recently discovered at Pitalkhora, this sculpture bears an inscription (pl. LII D), which is helpful in dating this and other recovered sculptures. The inscription is carved in two lines on the outer right palm in clearly-engraved letters of the second century B.C., reading *Kaṇhadāsena hiraṁakārena katā*, 'made by Kaṇhadāsa (Sanskrit Kṛishṇadāsa), a goldsmith'.

The *Mahāmāyūrī* text which mentions the name of the *yaksha* Saṅkārin (above, p. 69) may perhaps be referring to this image, which is the most prominent of its kind at Pitalkhora.

As a piece of sculpture it displays a fine sense of modelling, in spite of its heaviness, and thus ranks as one of the finest sculptures of its class in early Indian art.

2. Another important sculpture, a *yaksha* acting as a *dvāra-pāla* (pl. LVII A), was originally placed on the left side of the entrance to Cave 3; in fact, it was carved in one piece with the jamb of the doorway. The corresponding figure on the other door-jamb was found very much weather-worn and almost beyond reconstruction. The present sculpture is also damaged, the portion below the thighs being missing. Its height in its present state is 5 ft. 6 in., so that its total height, when complete, must have been about 7 ft. It would rank high among the best specimens of early Indian plastic art.

The figure is adorned with a very elaborate wig-like head-dress, which covers the ears and is fronted on the crest by a circular knot with an oblong protrusion in the centre. On the forehead are two sharp angles formed by the fringe of the wig. Two heavy serpent-ornaments (*sarpa-kuṇḍala*) are attached to the lobes of the ears, the upper parts of which have fan-like folds. Round the neck is a broad *graiveya* impressed with rosettes. It is tied at the back with a thick string, the end of which hangs down on the back. From over the left shoulder run down the schematic folds of the upper garment (*uttarīya*) crossing the decorated belt (*chhanna-vīra*), which comes down from the right shoulder. To the *channa-vīra* is attached the scabbard of the sword, the hilt of which is pressed close to the body by the left arm. On the left arm is a *keyūra* with three plaits, the central one of which is vertical and the side ones hooked. On the two fingers of the left hand are rings, the one on the ring-finger with an oval pattern and the other on the middle finger round in section. The right arm, bent at the elbow, holds a heavy and long spear. Both the wrists are decorated with heavy wristlets in four circles. The folded *dhotī* is tied on the waist with a decorated stringed belt, with its end hanging loose in front.

The most important feature of this sculpture is its facial expression. It displays a gentle smile with slightly-parted lips and bulging cheeks. The eyes, with prominent irises, are wide open. The nose is slightly broad, the nostrils indicated by small depressions. The features are boldly cut. The face was once painted in yellow and the lips in red, traces of which are still discernible.

[1] V. A. Smith, *History of Fine Art in India and Ceylon*, 2nd ed. (Oxford, 1930), p. 147 and pl. 101 A and B.

[2] Fergusson and Burgess, *op. cit.*, p. 221.

The round modelling of the face contrasts with the flattish treatment of the body—which may indicate the transition from the earlier to the later (Śātavāhana) plastic tradition.

3. This fragment of a sculptured pilaster, measuring 2 ft. × 1 ft. 5 in., depicts a *yaksha* and a female *chaurī*-bearer (pl. LVII C). The dwarf *yaksha* has his hands raised up to support on the head the base of an oblong platform, the front of which is decorated with the *vedikā*-pattern. Over it is a short octagonal shaft surmounted by a moulded base of an object, the upper part of which is missing. The face, with wrinkles on the forehead, open and bulging eyes, fleshy cheeks and the mouth open as a result of unsuppressed laughter, depicts a very jovial expression.

The *chaurī*-bearer stands to the left of the *yaksha* in a graceful pose. Her beautiful head-dress, tilted to the right, is tied into a conch-shaped knot, which has a subsidiary knot of the same shape on either side. Her ear-lobes are decorated with spiral ornaments, to which are probably attached pendants of pearls. She wears a *graiveya* and *stana-hāra.* Her right hand, flexed at the elbow, holds a *chaurī* and rests against the platform held by the *yaksha*, and her left hand, slightly bent, rests on her thigh. The upper part of her body is bare. The lower garment (*anuttarīya*) is tied round her waist; the folds of the garment hang down on the left and partly covers the loose *mekhalā*, which consists of collared beads in three strands.

The face of the female figure has a dignified expression. The eye-brows are well-defined and the nose is set between the slightly fleshy cheeks. The modelling, on the whole, tends to give the figure a robust look.

4. This 3-ft. high sculpture, carved on a pilaster, portrays a *yakshī* with a *karaṇḍa* (casket) over her head (pl. LVII D). She stands with her legs slightly apart and hands raised up to hold the *karaṇḍa.* She has a beautiful head-dress tied with ornamental bands, the whole forming a cushion for the casket. The face is damaged, but the pressed lips, the chin and the flushed face give her dignity. She has in the right ear-lobe an ornament made of ringlets, and in the left a circular ear-ornament (*tāṭaṅka-chakra*). Around her neck is a *graiveya* and a dangling *stana-hāra* in three strands. The right wrist wears a heavy double wristlet. The *uttarīya*, the folds of which are seen on the rear side, comes forward from over the shoulder and appears to have been tucked near the *mekhalā* below the waist. At the slender waist is tied the *anuttarīya*, the prominent folds of which hang down over the *mekhalā*, consisting of seven strands of collared beads.

5. The female door-keeper represented in this sculpture holds in her right hand a tall spear, the butt of which rests over her right foot (pl. LVII B). She has a head-dress all decorated with floral wreaths, particularly interesting being the large floral wreath coming down from the forehead and going behind the right shoulder. She wears a hanging spiral ear-ornament and a fairly broad *graiveya* of three strands. Her left hand is raised and doubly flexed. Each hand has two heavy wristlets. The *mekhalā* is of five strands and is worn loosely; to it is tucked a brocaded garment which gracefully hangs down below the knees. On her left hip is a scabbard held in position by a string going over the right shoulder. The right foot is straight, but the left is slightly bent at the knee imparting grace to her pose. She wears round anklets.

Altogether, the figure has a sturdiness worthy of a sentinel.

D. Kinnaras and gandharvas

1. This is a fragmentary sculpture of a winged *kinnara* (pl. LVIII A), remarkable on account of the success of the artist in depicting the effortless ease with which this semi-divine being, with incurved wings issuing out of his shoulder, floats in the aerial region below a projection carved with collared beads and balances in his left hand a bowl of flowers. His head is slightly turned to the left, making an angle with the body, which is again bent at the waist. He has a head-dress with a large knot of hair resting over the forehead on the left. His head is beautifully framed by a floral wreath adding greatly to the richness of the coiffure. His ears are decorated with heavy *karṇa-veshṭanas,* while round the neck is a broad band of *graiveya* imprinted with the rosette-design. On both the hands he has two heavy wristlets made of pearls. There is a very fine *dhotī* tied by a belt below the waist, its fluttering depicted by its raised ends on the left. The right thigh is covered with feathers in contrast to the left, which is covered by the tassels of the belt. Below the figure is a lotus in relief. Maybe, the figure had the feet of a bird.

It seems that the piece formed the extreme end of a large composition with a principal figure at the centre and another similar *kinnara*-figure at the other end.

2. This fragmentary sculpture represents a flying *gandharva* (pl. LVIII B), holding in his left hand a shield with a protective trefoil projecton on the inner side. Unlike the usual *gandharva,* who is in the attitude of adoration, the present one is a warrior.

E. Musicians

1. This fragmentary sculpture depicts a woman playing on a musical instrument (pl. LIX A). The face of the woman, absorbed in music, is bent towards the instrument, and the joy she is deriving from the music is reflected on her face. Her long coiffure is bordered by a wreath of flowers which almost frames her head and is tied behind in a knot. She wears a *tāṭaṅka-chakra* in the right ear, while a *karṇa-veshṭana* adorns the lobe of her left ear. She has the usual *graiveya* round her neck.

Though the shape of the musical instrument cannot be guessed, enough of it remains to show that, like the following two, it had seven strings.

2. Though this sculpture too is fragmentary (pl. LIX B), the musical instrument has survived almost in its entirety. The instrument, held by a youth against his right shoulder, has seven strings emanating from an elliptical gourd with a curved handle at one end, to which are tied the strings. The youth has a conch-shaped knot of hair on the head.

3. In this sculpture, also fragmentary, is seen the trunk of a male figure, wearing a *graiveya* and a *hāra* on the neck and heavy floral wreaths on the wrists (pl. LIX C). Pressed in his left arm is an instrument with seven strings. In his right hand he holds a plectrum, to play the instrument with.

F. Mahouts

1. This sculpture (pl. LIX E) represents one of the mahouts carved in front of each of the elephants on the plinth of Cave 4 (above, p. 74). A little over 5 ft. tall, he stands stiffly, with the flexed right hand holding a long-handled *aṅkuśa*. The wristlets



A. *Winged kinnara, from débris in forecourt of Cave 4. See p. 84*



B. *Flying gandharva, from débris in forecourt of Cave 4. See p. 84*



A, B *and* C, *musicians, and* D *and* E, *mahouts, from débris in forecourt of Cave 1. Hts. of* B, C *and* D, *9 ins., 1 ft. 6 in. and 1 ft. 9 in. See pp. 84 and 85*

To face p. 85

are made of square beads. Round the neck is a *graiveya* of oblong beads, fastened at the back by a string with a knot. The *dhotī* is tied at the waist and its folds are clustered in front of the left leg. The modelling of the face is bold and the flushed cheeks, the clinched lips and the open eyes attract attention.

2. Another mahout is represented in this fragmentary sculpture (pl. LIX D), the complete head-dress of which consists of a massive bedecked tuft of hair covering the entire scalp and projecting over the fore-head. Tied vertically by bands, it is divided into several sections. The figure wears a *graiveya* of four strands tied at the back. There are traces of paint-film, saffron on the face and red on the lips.

G. Mithunas

1. This pilaster (pl. LX A) contains three panels, one above the other, the top and bottom ones each with a standing *mithuna* and the middle one with horses. In the top panel the face of the male is damaged, while the upper part of the female is completely missing. The male has his *dhotī* tied by a stringed belt, the end of which hangs down on the left thigh. Heavy wristlets are worn on the right wrist. The female to the left of the male has similar wristlets. Her *mekhalā* consists of four strands. Above the feet are anklets.

The lower parts of both the figures in the second *mithuna*-group, on the bottom panel, are missing. The male, this time standing to the left of the female, puts his right arm around the waist of the latter, who, in turn, has her left arm on the right shoulder of the male. Both have broad *graiveyas* on their necks, the female having a *stana-hāra* in addition. The hair-style of the female, with a profusion of flowers and garlands, is interesting. The girdles and lower garments are similar to those on the first panel.

In the central panel is a pair of horses sitting back to back. The flowing manes and the anatomical details are remarkable.

2. On the upper panel of this pilaster (pl. LX B) is a kneeling elephant and on the lower is a couple, interesting on account of the peculiar hair-style and the costumes. The curly hairs of both the figures are tied in the middle by a band of cloth, that of the latter falling over her shoulders in locks. Her ear-ornaments appear to be simple almond-shaped pendants, in contrast to those of all other sculptures of Pitalkhora. She holds a cornucopia in the left hand and has a *mekhalā* of six strands.

The garment of the female figure appears to be a skirt hanging on the ankles in frills. The male figure is draped in a long garment which goes in folds over his right shoulder and hangs down well below the knees. The character of the drapery is definitely un-Indian and has a vague classical affinity. One wonders whether one sees in the sculpture an attempt to depict a Yavana couple who perhaps made donations to the caves. It may be recalled in this connexion that a number of inscriptions in west Indian caves record donations from the Yavanas.

3. This sculpture (pl. LX C), also on a fragmentary pilaster, is divided into two panels, the upper one occupied by an animal with the face of a lion, horns of a ram and the body and hoofs of a bull. What remains of the lower panel shows the standing figure of a male and the arm, probably of a female, on his left. The sculpture was not

completely finished; nevertheless, the head-dress, the broad band around the neck, the heavy wristlets and the *dhotī* tied with a knot in the centre of the waist are noteworthy.

4. This fragmentary sculpture (pl. LXI A) depicts a female dancer, only the upper part of her body extant, with her hands held over her head, and a male, his head and the part below the waist gone, standing to her right and pressing her lower lip with the thumb and forefinger of his left hand. The coiffure of the female hangs looped at her back. She wears bejewelled heavy wristlets, three in each hand.

5. This mutilated sculpture (pl. LXI B), pertaining to a pilaster, represents a *mithuna*, over which, in the upper panel, probably existed two animals back to back. In the *mithuna*-group the entire figure of the female is missing except the hand holding a cup, the contents of which she offers to the male to her right. The body of the male is also damaged, but the expression of pleasure on his face is clear. The knot of his hair falls on his forehead.

6. Both the figures in this fragmentary sculpture (pl. LXI C) appear to be females, the right one holding a globular pot with a cup-shaped lid with flaring rim in her left hand. The hair of the other, to the left of the pot, is tied on one side and is profusely decorated with wreaths.

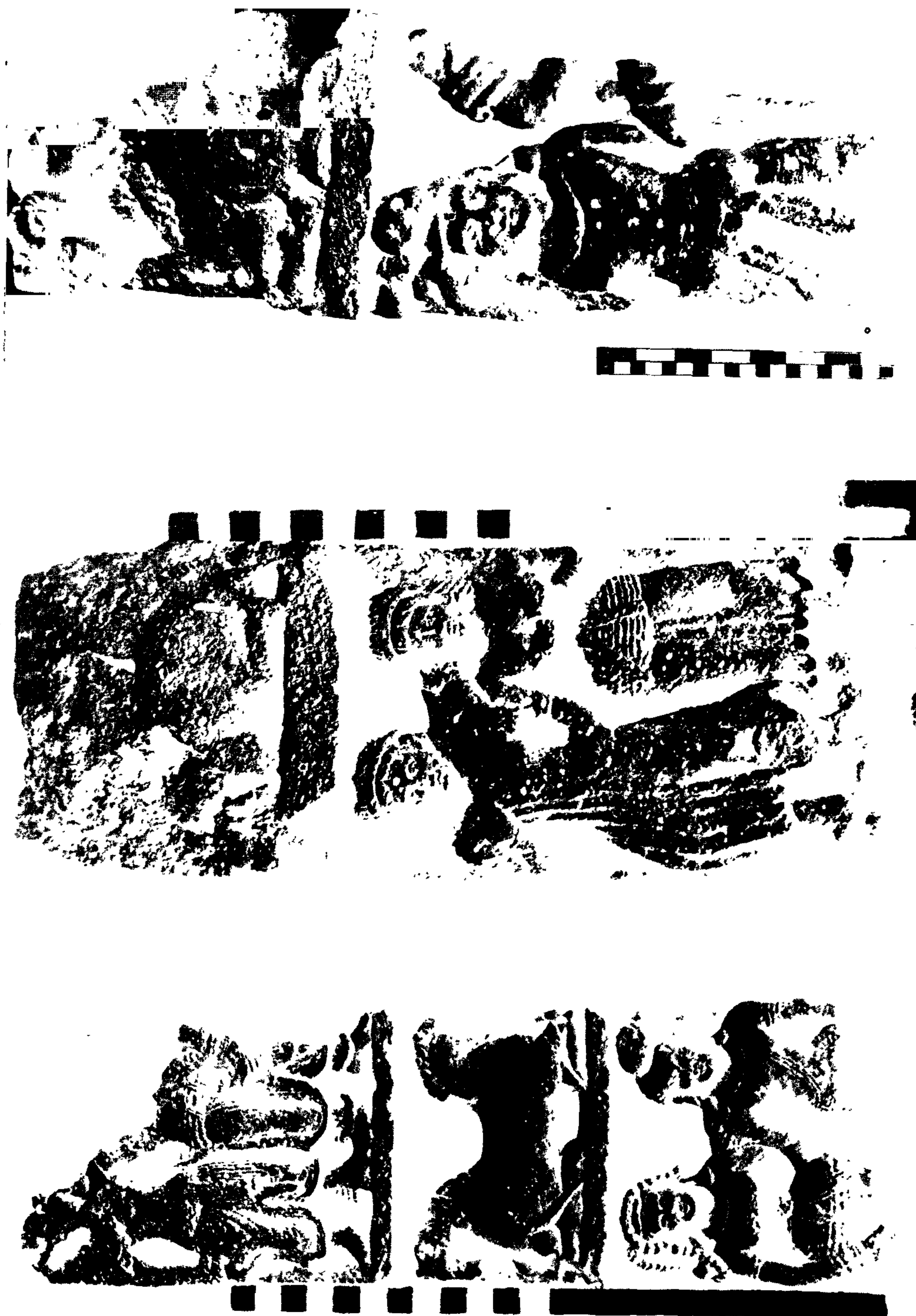
7. This partly-damaged sculpture (pl. LXII A) shows a *mithuna*, probably dancing. The male partner, wearing a cross-belt on his chest and a short *dhotī*, has placed his left hand over the shoulder of his companion, who, in turn, has passed her hand round the waist of the male. She has a short heavy necklace and wears a short *dhotī* tied by a *mekhalā*.

8. The subject of this sculpture (pl. LXII B) is a *mithuna*, the male holding the female by her left hand, as if persuading her to accompany him. He looks sideways at his companion and holds something like a musical instrument in his left hand, which is bent at the elbow and rests on the hip. His hair is done in three plaits on his left side. A heavy garland adorns the chest. The *dhotī* is tied in a knot below the navel and falls in heavy folds between the legs and on the left side. The *uttarīya* hangs loose in two loops.

The female also has her head slightly turned towards the male. She stands with her right leg slightly flexed and placed forward, seemingly ready to go in the reverse direction. The *anuttarīya* and *mekhalā* are similar to those of the *yakshī* described above (p. 83), but the ornaments on the neck are different. The *graiveya* has a big central bead on the first string, and its other two strings each have three prominent beads in the centre. The *stana-hāra* almost reaches the waist. The right ear-ornaments are frontally and the left ones laterally disposed. Around and almost framing the face is a floral wreath. The hair is tied in a knot on the right side.

The sculpture reminds one of the panels on the façade of the *chaitya*-cave at Kondane (second century B.C.).

9. This sculpture (pl. LXII C) is divided into three panels, with addorsed lions at the top and similar humped bulls at the bottom and with a standing *mithuna* in the central panel. The female stands to the right of the male and touches him caressingly with her left-hand fingers, while the male stands with his right hand flexed at the elbow and holding an object, probably a flower. He has *karṇa-veshṭanas* in the lower ear-lobes. The garments of both hang down in folds, that of the male twisting round his legs.



A B C

Mithunas on pilasters, from débris in forecourt of Cave 4. *See p. 85*



A



B



C

A and B, mithunas, and C, probably female figures, from débris in forecourt of Cave 4. See p. 86

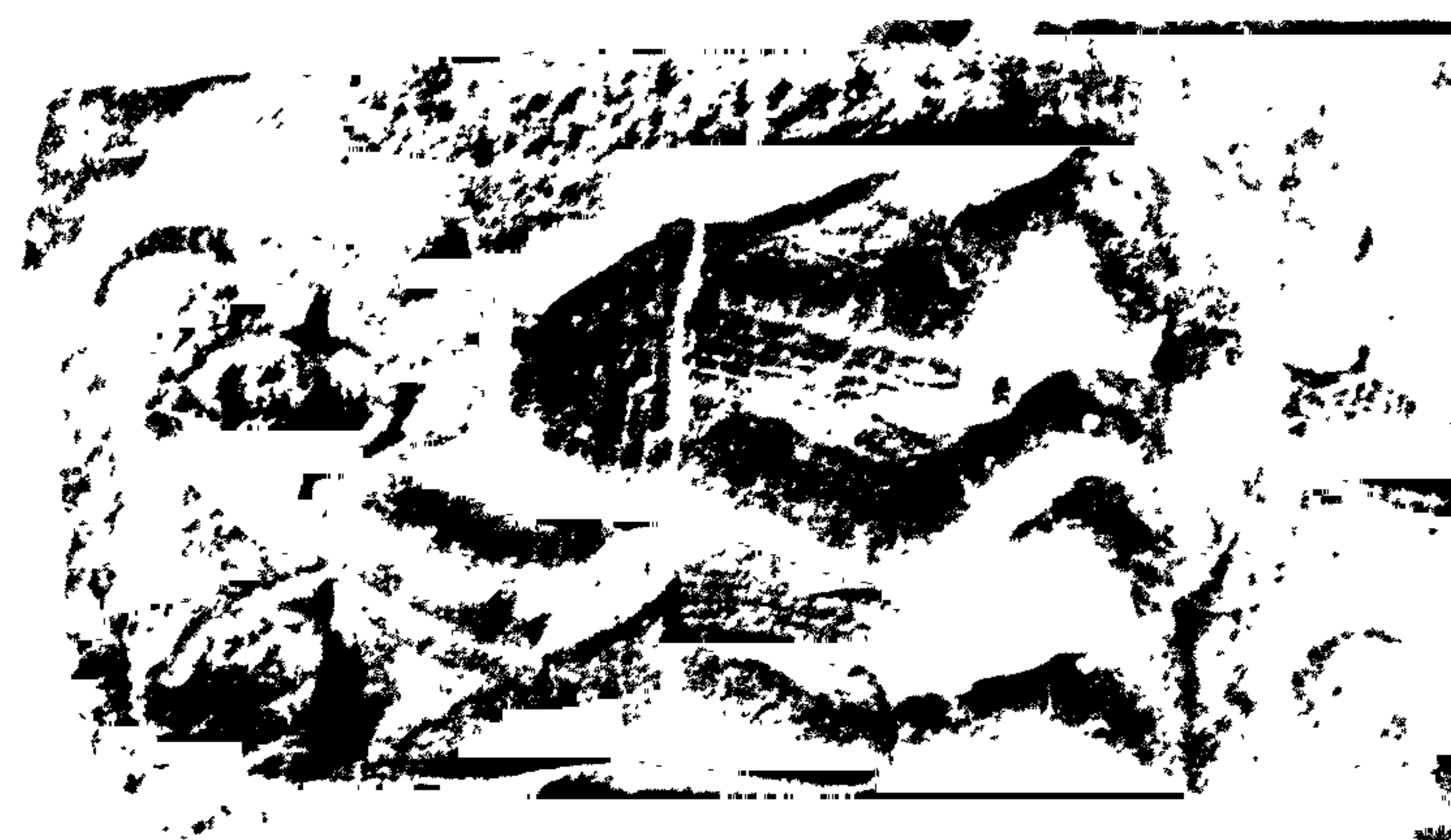
To face pl. LXII



C



B



A

Mithunas, from débris in forecourt of Cave 1. See p. 86



A. *Royal couple with attendants, from débris in forecourt of Cave 4.* *See p. 87*



B. *1, 4 and 5, stupa-shaped crystal reliquaries, respectively with bone beads, bone-fragments and coral bead, from sockets in the drum of stupa in Cave 3; 2 and 3, stupa-shaped crystal reliquaries from débris in forecourt of Cave 4; 6, crystal ring from socket in the drum of stupa in Cave 3, and 7, bead-shaped crystal reliquary, from socket in a boulder in forecourt of Cave 4.* *See pp. 88-90*

H. Royal couple

In spite of its broken condition, the sculpture (pl. LXIII A) is outstanding by virtue of its balanced composition and richness of details. The main subject is a royal couple, the king seated on a decorated octagonal *pīṭha* with a cover, probably of animal-hide, upon it, and the queen sitting beside him. The left portion of the king, together with all that existed to his left, is gone. His right arm holds the queen at the back. He wears a circular pendant ornament on his right ear. His *dhotī* is tightly worn round the legs but hangs in the centre in a folded loop ending in a tuft. His left leg is flexed and rests on the throne, and his right leg rests on an oblong foot-stool, decorated at the edges in the same way as the throne.

The queen is seated on the right thigh of the king, her left arm seeming to go round the shoulder of the latter. She is richly bedecked with ornaments—a five-stringed *graiveya*, a two-stringed *stana-hāra*, a thick double wristlet preceded by five bangles and a seven-stringed *mekhalā*. Her head, turned towards the king, has a flowing head-dress bordered by a garland. Her lower body is covered by a *dhotī* with schematic folds. Her legs wear anklets, the flexed right one resting on the throne itself and the left one on a foot-stool.

To the right of the queen is a female attendant holding in her right hand an oblong receptacle, out of which the queen takes out with her right hand a handful of objects, possibly flowers. The attendant has the same kind of hair style as the queen, but the bun at the back is more prominent. Her wristlets and *mekhalā* are also of the same kind as those of the queen. Her lower garment hangs on the left leg in vertical folds partly covering the *mekhalā* and on the right leg in oblique folds.

At the back was probably a series of figures, two of the extant ones, both females, standing respectively behind the queen and the attendant and touching the hair of the respective lower figure with the right hand, the left hand of the figure at the extremity being raised, as if holding an object.

The extant fragment of the sculpture is a part of a larger scene which might represent a Jātaka story.

I. Miscellaneous sculptures

1. A miniature *stūpa* in half-relief (pl. LXIV A, *1*) is a piece of great interest. The boulder on which this is carved was excavated out of the débris in front of Cave 4; it may be surmised that this had been fixed somewhere on the façade of this great *vihāra*. It has three platforms forming the base of the *aṇḍa*, the exterior of which is decorated with a *vedikā*. Over this rises the almost semicircular *aṇḍa* with a socket for the relics. There was a triangular stone in position blocking the socket. No relics were recovered from the socket, but it may not be wrong to surmise that they might have been one or both of the crystal *stūpa*-reliquaries found in the débris in front of the *vihāra* (below, p. 89). Over the top of the *aṇḍa* is a rectangular box-like *harmikā* with the *vedikā*-pattern on three sides.

Two detached stone blocks with sockets for relics (pl. XLIV A, *2* and *3*) were also recovered, one of them containing a bead-reliquary (below p. 88).

2. This fragment of a sculpture (pl. LXIV B), probably detached from a frieze, represents a stag with long wavy horns, bending forward in the act of grazing. The fine modelling of the body indicates agility.

3. One of the architectural pieces (pl. LXV A) was found close to the row of elephants on the plinth of Cave 4 (above, p. 73) and may have slipped from its original position on the façade of the cave. It is a loose piece, from which one gets a clear idea how some parts of the façade, where the rock was poor and weathered, were covered with detached sculptures. The piece depicts a double-storeyed palace (*prāsāda*). The lower storey has five small skylights (*gavāksha*) over a *vedikā* and four larger ones above. Five *yaksha* figures in low relief between each of the upper *gavākshas* support the superstructure with their raised hands. The upper storey has also a moulded base with the *vedikā*. Above are four windows (*vātāyana*) separated from each other by pilasters mounted by five *gavākshas*. Two of the *vātāyanas* have the *vedikā*-pattern set across them. Above this, as in the lower storey, are four larger *gavākshas* with five similar intervening *yaksha* figures. The entire structure is evidently an imitation of the wooden façades of contemporary palaces.

4. Another architectural piece (pl. LXV B) has at its base the *vedikā* in two tiers, separated from each other by a projecting moulding. On the uppermost extant tier, within a recess, is a projecting *gavāksha* in the centre, flanked on either side by *vedikās*; at each extremity is a structure roofed by a semicircular cupola.[1] The top juts forward in corbels.

5. Of the decorative pieces, one (pl. LXVI A) is set within a frame of creepers on one side and rosettes on two other sides, the central part being filled with lotuses issuing in all directions out of calyces. On the top is a fragmentary *vedikā*.

6. Of the other fragmentary pieces, the following are illustrated (pl. LXVI B): *1*, a lotus-creeper in a long panel; *2*, a central lotus-medallion, out of which issue curved bands, two of the extant ones being decorated with pellets and one with lotuses; *3*, a row of lotuses framed within bead-and-reel borders; and, *4*, a fragment of a door-jamb with an ornamental lotus decorated with leaves and flower-petals.

6. CRYSTAL OBJECTS

In all seven crystal objects, six of them reliquaries and the seventh a ring, were discovered. Five of the reliquaries (1 to 3, 5 and 6 below, pl. LXIII B, *1*, *4*, *5*, *2* and *3*) were shaped like the *stūpa* and the remaining one was a bead (7 below, pl. LXIII B, *7*). Three of the *stūpa*-reliquaries (1 to 3 below, pl. LXIII B, *1*, *4* and *5*), all containing relics, and a ring (4 below, pl. LXIII B, *6*) were recovered from within the sockets cut into the drum of the *stūpa* of Cave 3 (above, p. 72). The other two *stūpa*-reliquaries (5 and 6 below, pl. LXIII B, *2* and *3*) were found in the midst of débris in front of Cave 4 (above, p. 73) and the bead-reliquary (7 below, pl. LXIII B, *7*) within a socket in a broken boulder lying amidst the same débris (above, p. 88).

The discovery of so many reliquaries must be regarded as one of the most important results of the operation. Not only do the reliquaries testify to the skill of the craftsman in carving difficult shapes out of the hard material of crystal; they also bring to light the

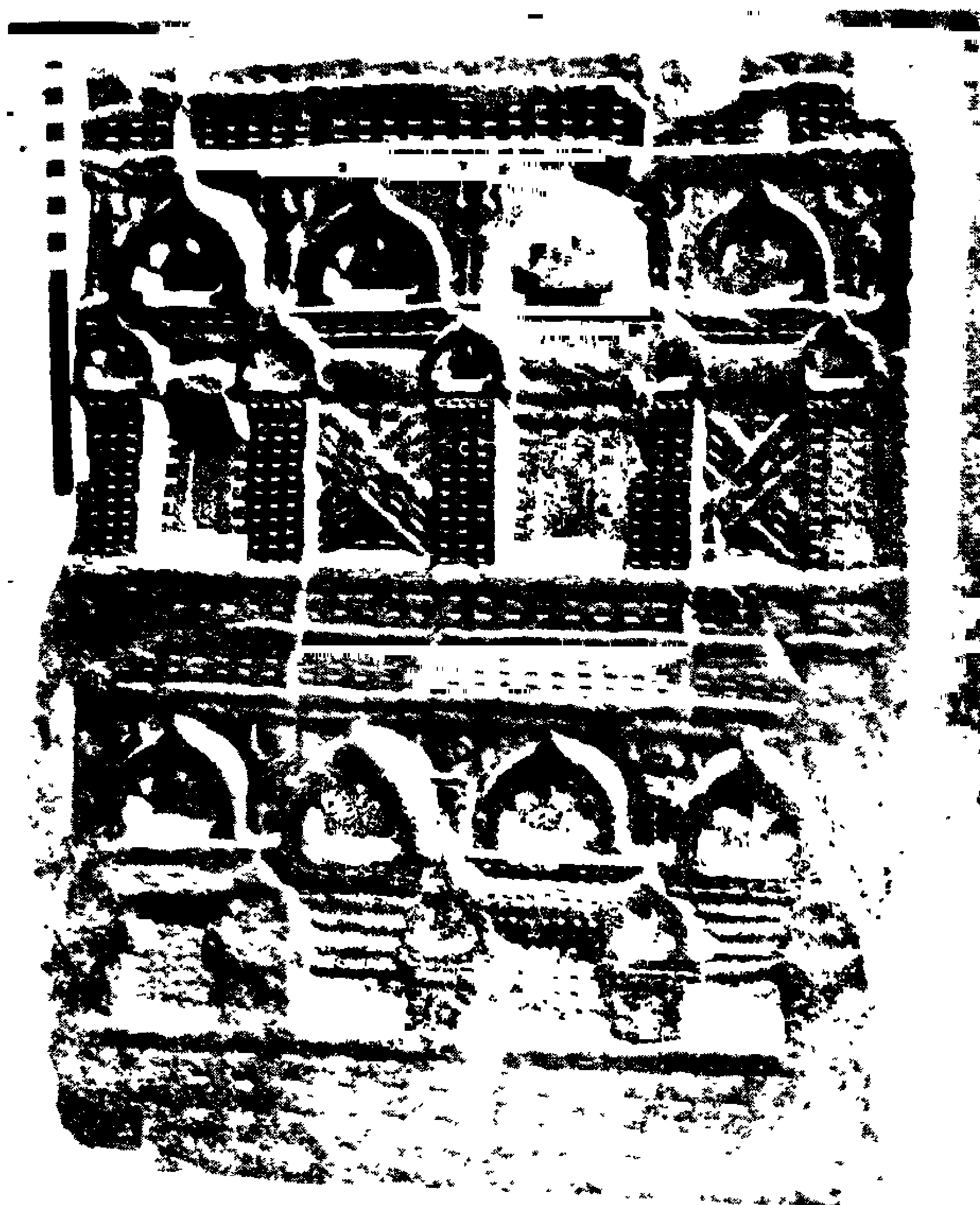
[1] This type of structure seems to have developed later on into the *koshṭha* of the Dravidian temple-complex placed over the projecting corners of the *sabhā-maṇḍapa* or *vimāna*.



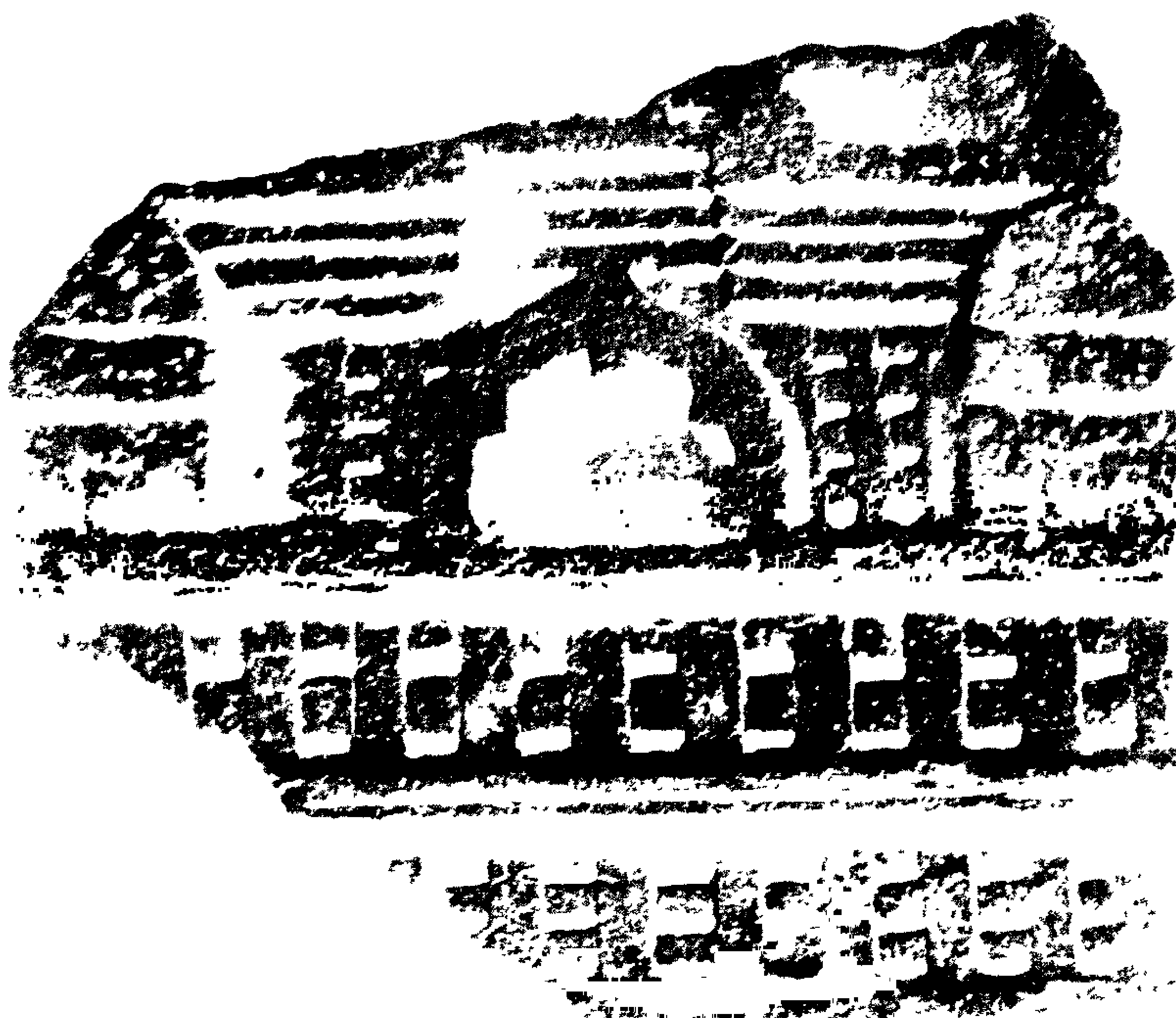
A. *1, miniature stupa, in relief, with socket for relics; and 2 and 3, stone-blocks with sockets for relics, from débris in forecourt of Cave 4. See p. 87*



B. *Stag in relief, from débris in forecourt of Cave 4. See p. 87*



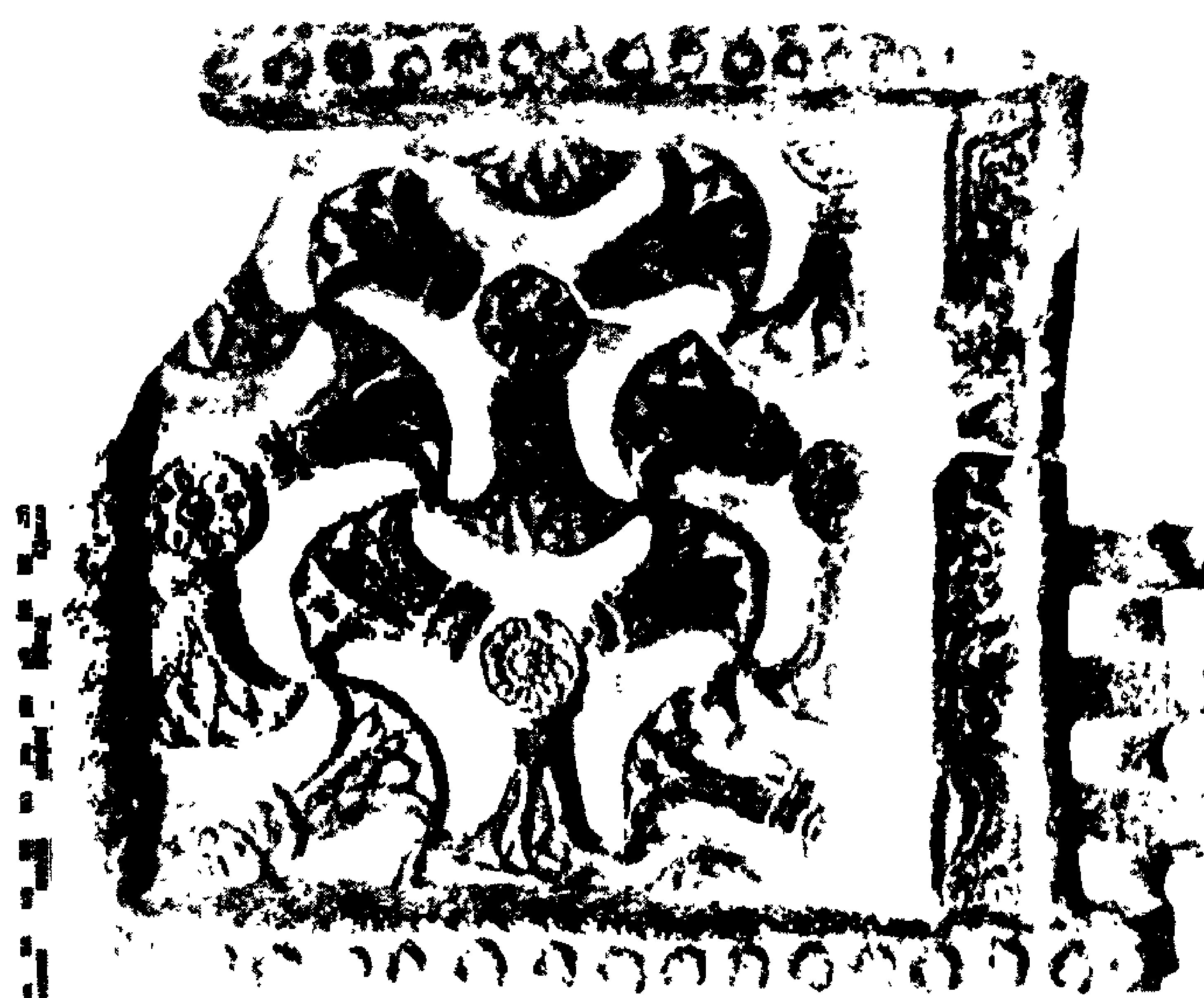
A



B

Architectural pieces, from débris in forecourt of Cave 4. See p. 88

To face pl. LXVI



A





4



3



2



1

B

Decorative pieces from débris in forecourt of Cave 4. See p. 88

To face pl. LXV

Buddhist practice of depositing relics within rock-cut *stūpas* inside *chaitya*-halls and also within other *stūpas* carved in relief elsewhere.[1]

In the description below the objects found *in situ* (1 to 4) are dealt with first and are followed by those found in the débris.

1. This *stūpa*-reliquary (ht. $2\frac{3}{4}$ in.; dia. at base 2 in.) has a projecting base over which rises the slightly-tapering semicircular *aṇḍa* with a circular hole at the top for holding the relics and receiving the shaft of the stopper which was shaped in such a way that it contained the *chhattra* at the top and the square *harmikā* in the middle (pl. LXIII B, *1*). Within the hole were found two beads of bone, one long cylinder circular and the other standard cylinder circular.

2. This *stūpa*-reliquary (ht. 2 in.; dia. at base $1\frac{1}{2}$ in.) has a similar projecting base but a rather squat *aṇḍa* and short *chhattra*-shaft (pl. LXIII B, *4*). It contained two small pieces of bone. If the shape can be taken to be the criterion of the age of the reliquary, it may be placed in the first-second century A.D., as it resembles in shape the rock-cut *stūpas* in western India of that age. Its deposition within the *stūpa* may, therefore, have taken place later than the excavation of the *stūpa.*

3. With a projecting base and squat *aṇḍa*, this *stūpa*-reliquary (pl. LXIII B, *5*) is the smallest of its class (ht. $1\frac{3}{8}$ in.; dia. at base 1 in.). The stopper-*cum-chhattra* has the shape of a short moulded knot. From its shape, it would appear to be more or less contemporary with the previous one, both having been deposited in the same socket.

4. This ring (ht. from base to apex $1\frac{3}{8}$ in.; dia. of inner circle $\frac{3}{4}$ in.; length of base $1\frac{1}{2}$ in.) has a plain biconical bezel and a groove on the inner circle (pl. LXIII B, *6*).[2]

5. This *stūpa*-reliquary (ht. $2\frac{1}{4}$ in.; dia. $1\frac{1}{4}$ in.) differs from those described above in that it has no projecting base but has instead a short circular stem at the bottom, so that it could be fitted into a detached base (pl. LXIII B, *2*). The shape is almost hemispherical with a truncated top, where there is a circular hole. The broken shaft of the *chhattra* consists of three round mouldings, each looking like a broad-mouthed *ghaṭa*, with the edge having a conical moulding; the usual *harmikā* does not form part of it. It is exactly similar to the long shaft of the wooden *chhattra* on the rock-cut *stūpa* in the *chaitya*-cave at Karla and may, therefore, be ascribed to the first century A.D., when some votary might have deposited it inside the *stūpa* on the façade of Cave 4 (cf. above, p. 87).

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[1] Of the rock-cut *stūpas* in western India, the one at Karla is even now complete with all the components, including the wooden *chhattra*. It will not be a wonder if the socket for holding the *chhattra*-shaft contains relics. The sockets noticed on the *stūpa* at Bhaja must have, as suggested above (p. 73), contained relics. An inscription on a pillar in the *chaitya*-cave at Karla, Burgess, *op. cit.*, p. 91, shows that relics were deposited inside pillars as well, for it records the gift of a pillar with corporeal relics (*sa-sariro thabho*). It is interesting to note that the pillar on which the inscription is engraved has a hole, no doubt to contain the relics referred to, in the centre of a lotus carved in the front of the pillar just below the inscription.

So far, only one crystal relic-casket has been discovered in western India, at Sopara, Bhagwanlal Indraji in *Jour. Bombay Br. Roy. As. Soc.*, XV (1881-82), p. 307. It is in two parts, the body and the lid, and has not the unique shapes of the Pitalkhora reliquaries. It may be mentioned that *stūpa*-shaped crystal reliquaries have recently been discovered at Nagarjunakonda.

[2] Rings of rock-crystal appear at Sirkap, Taxila, in the first centry A.D., J. Marshall, *Taxila* (Cambridge, 1951), II, p. 641.

6. This *stūpa*-reliquary is distinctive in shape, as it has a slightly higher projecting base and a proportionately higher *aṇḍa* than the rest (pl. LXIII B, *3*). The *aṇḍa*, instead of being flat at the top, has the shape of a *harmikā*, through which is bored a round hole into the *aṇḍa*. The shaft of the *chhattra* is missing. There was a stopper-like cylindrical stone object inside the hole.

7. This distinctive long cylinder square bead (pl. LXIII B, *7*) was undoubtedly a reliquary, as its perforation was closed at each end by small stone stoppers, in one case with a knob. The space between the stoppers was utilized for keeping the relics, which, however, are missing.

7. COPPER VESSELS

Two copper vessels were recovered. One of them (fig. 3, *1*) has a flared rim, a globular body and an attached base. A small rib at the junction of the body and the neck is the result of the joining of the two pieces manufactured separately. The second vessel (fig. 3, *2*) is fragmentary; it has a short outcurved neck and five incised lines on the shoulder. It is not possible to ascribe any date to them beyond that they belonged to a period when the caves were in occupation.

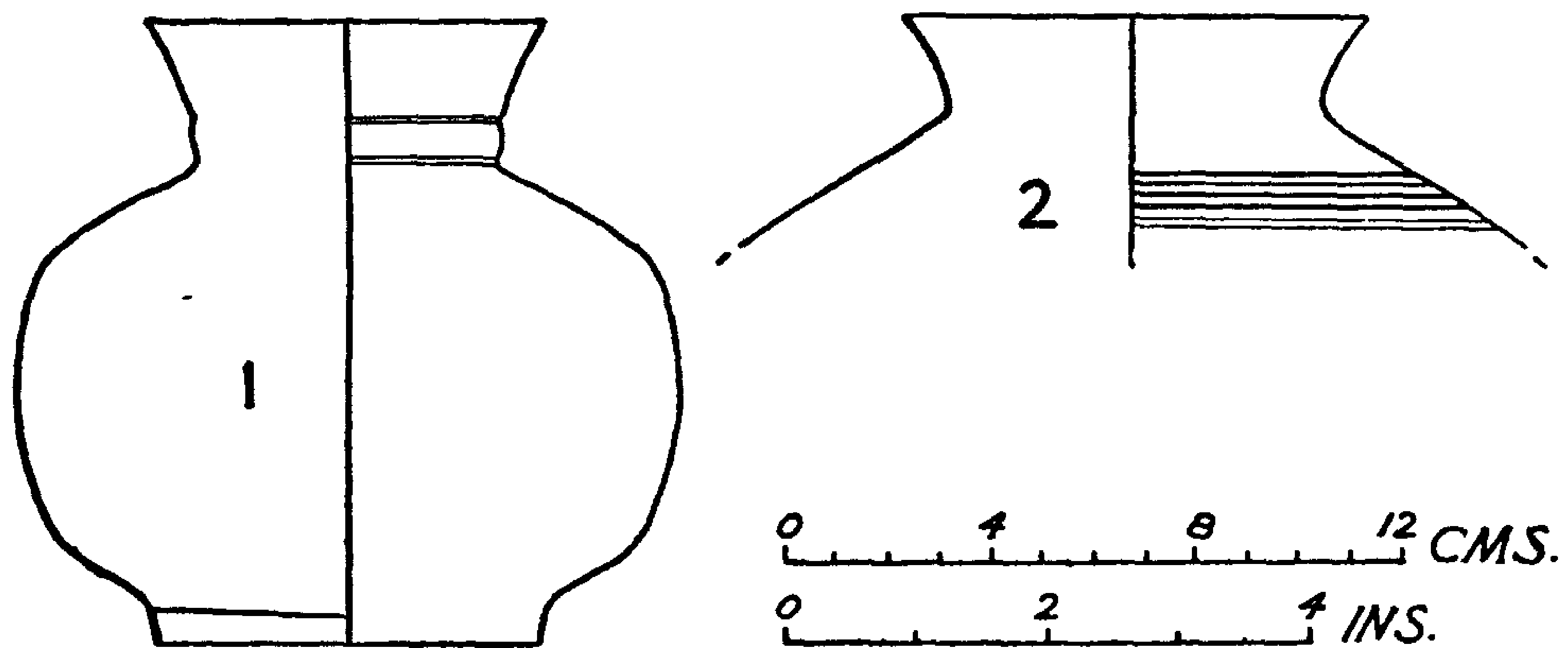


FIG. 3. *Copper vessels*

8. THE POTTERY

Amidst the débris on the forecourt of Caves 3 and 4 and within the cistern between Caves 7 and 8 (above, p. 77), a large quantity of pottery was discovered. The collection included the well-known spouted sprinkler (fig. 4, *1*), resembling the 'Roman, Samian and other Red wares of western Asia',[1] and indigenous imitations thereof in cruder fabric and with crackled red slip (fig. 4, *2* to *4* and *6* to *8*). A solitary fragment of a black polished bowl (fig. 4, *20*) may be a remote imitation of the Northern Black Polished Ware: its polish is definitely not as bright as that on the genuine specimens of that Ware found even at west Indian sites like Bahal and Nasik.[2] Other types, including the vases and *hāṇḍī* with beaded

[1] B. Subbarao, *Personality of India*, 2nd ed. (Baroda, 1958), pp. 46-47.

[2] H. D. Sankalia, B. Subbarao and S. B. Deo, *Excavations at Nasik and Jorwe* (Poona, 1958), pp. 132-34 and 137-38.

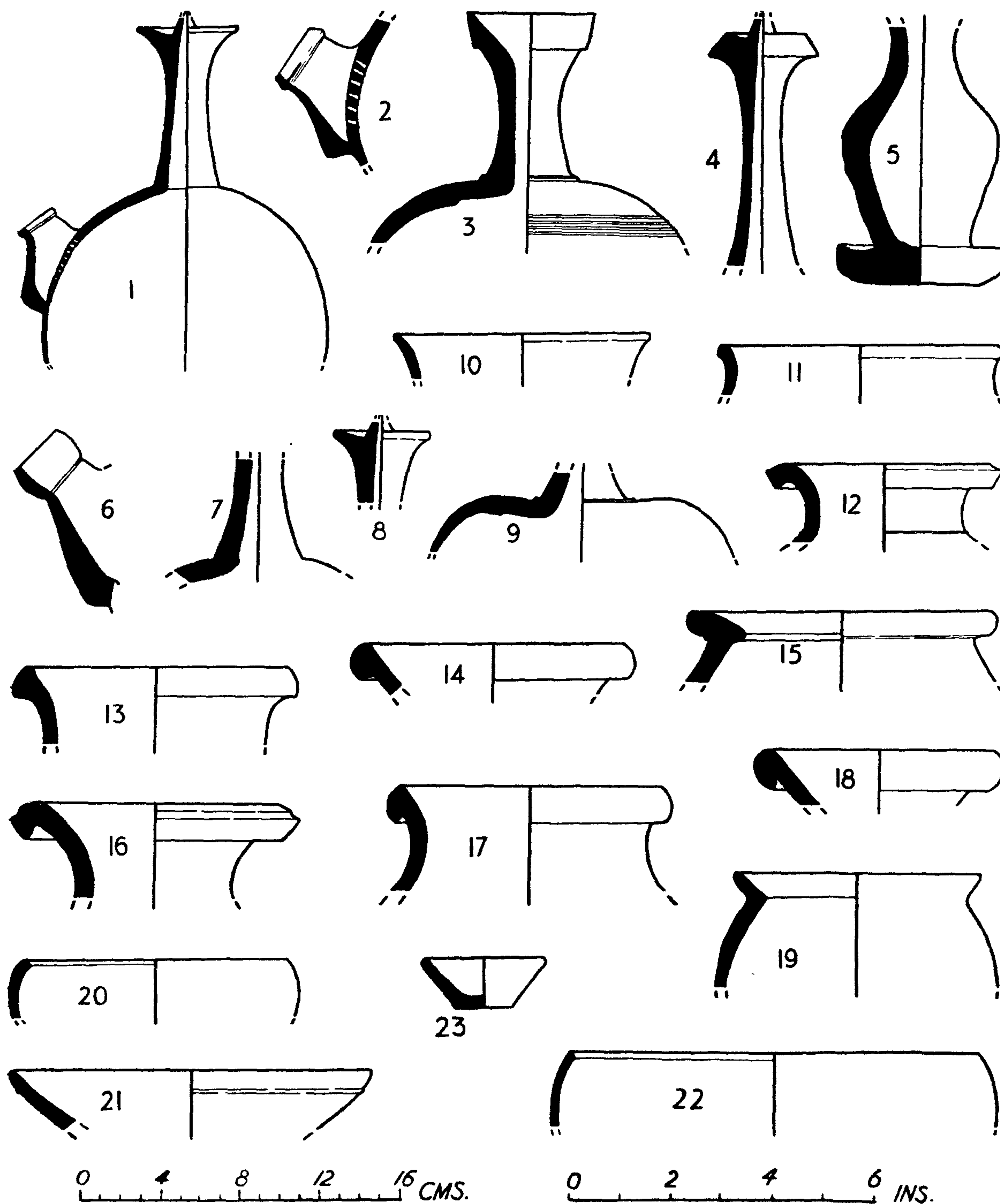


FIG. 4. *Pottery-types*

and undercut rim (fig. 4, *17* and *18*), are characteristic of the Śātavāhana levels of these two places.[1]

Select specimens are described below.

Fig. 4

1. Bottle-necked sprinkler with an outcurved featureless rim forming a flange with a conical knob at the top, a globular body and a short spout having perforations at its junction with the body. Both the neck and the spout are luted to the body. Of fine fabric, it is pink in colour.

2. Spout of a sprinkler. Of a fabric coarser than that of 1, it is treated with a reddish slip.

3. Upper part of a vase with a splayed-out externally-thickened oblique-cut rim, a high vertical neck and a shoulder having grooves. Of coarse fabric, it has a crackled dull-red slip.

4. Fragment of a sprinkler similar to 1, but with an externally oblique-cut rim. Of a fabric coarser than that of 1, it is treated with a pinkish slip.

5. Lower part of a vase with a tall convex body and a projecting discoid base. Of coarse fabric, it is devoid of any slip.

6. Spout, probably of a sprinkler, similar to 2.

7. Upper part, without rim, probably of a bottle-necked sprinkler. Of fine fabric, it is treated with a bright-red slip.

8. Fragment of a sprinkler similar to 1, but coarser in fabric.

9. Upper part, without rim and neck but with a squarish shoulder, of a vase of the Red Polished Ware.

10. Everted featureless rim and part of a seemingly-concave neck of a vessel of the Red Polished Ware.

11. Everted slightly-thickened rim and part of a seemingly-concave shoulder of a vase of the Red Polished Ware.

12. Fragment of a vase with an outcurved externally-drooping oblique-cut rim, a concave neck and a weakly-ribbed shoulder. Of coarse fabric, it is devoid of any slip.

13. Fragment of a vase of red ware with an out-turned and thickened rim and possibly a vertical neck. Of coarse fabric, it is devoid of any slip.

14. Fragment of a vase of dull-red ware with a splayed-out externally-thickened and oval-collared rim. Of medium fabric, it is treated with a red slip.

15. Fragment of a cooking vessel (*hāṇḍī*) with an out-turned internally-thickened and externally-ribbed rim. It is treated with a red slip showing a crackled surface.

16. Fragment of a vase of red ware with a flared externally-drooping oblique-cut grooved rim. Of medium fabric, it is treated with a bright-red slip both inside and outside.

17. Fragment of a vase with an outcurved thickened externally-beaked and undercut rim and a concave neck.

18. Fragment of a vase with a splayed-out externally-beaked and undercut rim. Of coarse fabric, it is devoid of any slip.

19. Vase with an out-turned thinning rim, a carinated inconspicuous neck and a globular body. Of coarse fabric and fired indifferently, it is devoid of any slip.

20. Bowl with an incurved internally oblique-cut rim. Of fine fabric, it has a polished black surface.

[1] *Ibid.*, pp. 64-65.

21. Shallow basin of pinkish-red ware with a featureless externally weakly-ribbed rim and narrowing sides. Of medium fabric, it is devoid of any slip.

22. Bowl of red ware with an incurved internally oblique-cut rim. Of medium fabric, it is treated with a red slip.

23. Miniature bowl with a slightly-inverted featureless rim, narrowing sides and a flat base. Of medium fabric, it is devoid of any slip.

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TECHNICAL SECTION

EXAMINATION AND PRESERVATION OF A PAINTED STUCCO HEAD

By J. C. NAGPALL and O. P. AGRAWAL

CONTENTS

1. INTRODUCTORY

THE STUCCO HEAD UNDER DISCUSSION WAS COLLECTED BY SIR AUREL STEIN FROM THE ruins of a shrine outside the walled town of Kara-Khoto, the 'Black Town', in the southernmost region of Mongolia, in the course of his expedition in Central Asia during 1913 to 1915 and numbered by him KKII·0164. The town is of considerable historical interest, since it was the seat of the Hsi-Hsia dynasty and was situated along the route of nomadic excursions from the north. That the ruins KKII, from which the stucco head was recovered along with other objects, represented a most valuable site from the antiquarian point of view is evident from Colonel P. K. Kozlov's report of his expedition of 1907-09.[1] In the wake of his exploration Colonel Kozlov had carried away to the Asiatic Museum of the Russian Academy at Petrograd a large number of manuscripts, images, paintings, etc., but also left behind, scattered in the ruined shrine, a large number of other relics, generally comprising fragments and broken objects. Sir Aurel Stein attributed this 'waste' deposit to a period between A.D. 1032 and 1226, when the Hsi-Hsia rule was terminated by a Mongol invasion.[2] It appears that the sand-drift and wind-erosion, to which the area was subject, prevented the re-occupation of the town after this assault, so that the relics of the site, of which the stucco head is one, were recovered from partially-buried ruins.

2. DESCRIPTION OF THE OBJECT

The stucco head, with a smiling face, 10 in. high and 6 in. across, could have been a part of one of the many life-size figures which embellished the sepulchral shrine or a

[1] Aurel Stein, *Innermost Asia*, I (1928), Ch. XIII.
[2] Aurel Stein, *op. cit.*, p. 452.

decorative piece in itself. As received in the Central Asian Antiquities Museum, New Delhi, the remnants comprised only the left half of the face. The large eye-ball and lips were seriously damaged, and the nose had almost disappeared, leaving only the flat base on which it had been built. Besides considerable damage to the hair and the chin, other structural injuries were comparatively less deep and consisted of the flaking of the plaster and upper layers of the mud-support below the lower lip, eye, etc. Pl. LXVII A represents the state of the object before any steps were taken to preserve it.[1] In its extant condition the general curvature of its back was more or less in conformity with the thickness of its wall. This curvature could be easily produced by scraping the exposed back of the stucco, although there is no record available as evidence of such attempt. The presence of chisel-marks (pl. LXVII B), however, lent support to this possibility. In any case, the clay out of which the head was fashioned was strengthened with fibrous materials, like straw, husk and reed. Being subject to continued decay, the degree of strength imparted by these organic materials steadily declined and the fabric of the stucco object weakened. It was fortunate that, unlike some other objects of the same material, recovered by Stein during his explorations, the figure under study was not subject to the deleterious action of soluble salts, as was evident from the fact that the water-extracts of the clay from the stucco were found to be free of the sulphates and chlorides of calcium, magnesium and sodium. Its plaster and pigments, therefore, escaped flaking or peeling, which is the result of salt-efflorescence and repeated salt-crystallization. Other harmful effects of unfavourable environmental conditions were nevertheless manifest. A tenacious layer of compacted grime and dust of varying thickness and texture covered the greater part of the object, although there were areas where the underlying pigment was clearly visible through the overlying accretion. The white priming or ground upon which the colours were laid was bereft of pigments over sizable portions, the uncovered priming itself having suffered considerable abrasion over other areas. Round about and below the absent ear the entire outer side of the face was disfigured by a tough irregular deposit of cemented sandy clay, clumps of which were adhering to the right part of the forehead. A crack running downwards from a side of the mouth was also observed to be filled with a wax-composition, generally tinted to match the surrounding colours.

3. EXPERIMENTS AND ANALYSES

Taking the construction of a paint-complex to be a stratified system, the painting on the object is composed of three principal layers—the mud-support, the white ground and the pigment-layer. Pl. LXVIII A is a photomicrograph of the cross-section of the layers of the paint-complex. Over a coarse plaster constituting the mud-support was given uniform coating of finer clay to render the surface smooth and even. There was no evidence of the presence of any surface-varnish on the top of the paint, so common in oil-paintings, even under filtered ultra-violet light. Here and there over the pigment an oily residue saturated with colloidal dust could be seen, but as it was too sporadic to be the remnants of an original surface-varnish or glaze, it appeared to be only a later accretion.

As stated above the mud-support was strengthened with husk and straw (pl. LXVIII A does not show the entire thickness of the support). A microscopic examination of minute specimens of the very thin layer (thickness 20 μ) of the white ground, which

[1] The back of the stucco was found to be liberally impregnated with paraffin-wax, evidently representing an earlier attempt at its consolidation.

was observed to consist of only one application, revealed the presence of a fibrous lath-like particles or grains derived from gypsum, pl. LXVIII, B and C representing photo-micrographs, respectively in ordinary and polarized light, of some of these grains amidst a confused mass of extraneous material. This was confirmed with the aid of micro-chemical analysis, which had to be taken recourse to as the quantity of material available from the object made a regular quantitative chemical examination difficult, and as such its degree of purity or impurity could not be determined. For the identification of these fibrous lath-like particles a study of the mineralogical nature of the substance had to be undertaken. When examined under the microscope for refractive index by the Becke method, most of these fibrous grains gave a value between 1·5689 and 1·5598, mostly nearer to the higher figure, which generally corresponds to the refractive index of anhydrite, the dehydrated form of gypsum. A very few of the fibrous grains had the refractive index 1·52, which is the value for gypsum.[1]

It would be safe to conclude from these observations that the gypsum used in the object was almost dead-burnt for the purpose of laying the ground-coat to prepare the clay-support for receiving the paint. With gypsum roasted at a temperature lower than that required for the production of anhydrite, dehydration is partial, and the product tends to revert to the dihydrate form.[2] Again, most of the natural varieties of gypsum are known to retain their fibrous microstructure even after conversion to anhydrite by heating. From a mineralogical examination of the white ground it could also be gathered that the gypsum used was of an impure variety.

It is not out of place to state here that gypsum is considered a very suitable ground for painting on wood and has also provided the major component for the grounds of famous canvases of Italian masters of the Renaissance.[3] For paintings on walls or mud-supports gypsum-grounds have been observed to be satisfactory generally in arid or semi-arid regions,[4] a limitation which is due to the appearance of salt-efflorescence on gypsum in moist climates and which was probably not unknown to the painter of the dry Central Asian region.

Only red and brown pigments in various shades had been used in painting the stucco. The bright-red pigment on the lips, almost ranging upon deep scarlet, appeared to be a colour quite different from the brown hues occurring on other portions and very much resembled the red-lead or mercury-oxide colours, though numerous chemical and micro-chemical tests failed to indicate the presence of either of these materials. The pigments, therefore, appeared to be ochre-colours of various grades of purity and composition,—a fact established through chemical tests with ammonium sulphocyanide and potassium ferrocyanide. A microscopic examination with quinoline and ammonium thiocyanate also led to the same conclusion. Accordingly, the pigments found on the stucco face exhibit, to a certain measure, the rich array of colours offered by the many naturally-occurring iron-ochres of different hues. Specimens of these pigments taken from various spots on the stucco were also found to have traces of calcium sulphate, which must have been derived from the ground-coat containing anhydrite. In view of the minute amounts indicated, the calcium sulphate or gypsum could not have been a deliberate addition to the colours for their preparation. Secondly, gypsum has no chemical or physical properties, like that of lime, to serve as a suitable binding vehicle for paintings.

[1] E. H. Kraus, W. F. Hunt and L. S. Ramsdell, *Mineralogy* (New York, 1951), pp. 327 and 333.
[2] J. J. Mattielo, *Protective and Decorative Coatings* (New York, 1947), II, p. 456.
[3] Max Doerner, *The Materials of the Artist* (London, 1949), p. 29.
[4] *Ibid.*, p. 308.







A B C

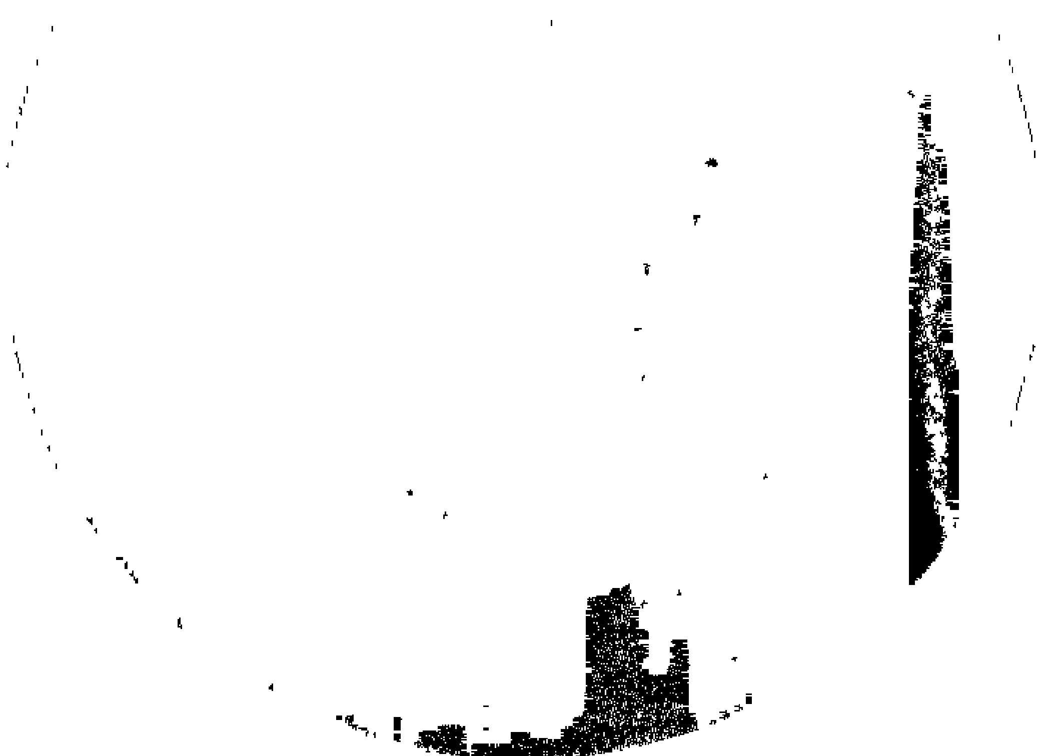
Stucco head from Kara-khoto: A *and* B, *before preservation, and* C, *after preservation.* *See p. 95*



A. *Photomicrograph (× 50) of cross-section of paint-layer: A, part of support of coarse mud-plaster, B, layer of fine clay, C, coating of white priming, and D, pigment-layer. See p. 95*



B. *Photomicrograph (× 80) in ordinary light showing fibrous lath-like particles of anhydrite. See p. 96*



C. *Photomicrograph (× 325) in polarized light of anhydrite from ground. See p. 96*



D. *Photomicrograph (× 120) of crackle of glue obtained from paint-layer. See p. 97*

4. TECHNIQUE OF THE PAINTING

It was obvious that the technique of the execution of the painting was tempera. Efforts aimed at the determination of the nature of the binding medium, therefore, appeared to be worth while, more so since binding media like glue and gelation are known to have survived for centuries under desert-conditions. Binding media are generally the same in the ground—and paint-layers, but in the present case both were subjected to examination. In view of the extremely minute quantities available, the detection of media in such cases has always posed an extremely delicate problem, though considerable advances have been made and the methods available in conservatorial circles are being standardized and perfected. All the same, a fairly clear picture can be made to emerge when both physical and chemical tests supplement each other to reach conclusions. Thus, when specimens from the stucco were examined for the presence of carbohydrates by the Molisch's method, a negative test indicated that gums and starchy material, which could have been employed by the artist as a binding vehicle, either had not been utilized or have completely perished over the centuries. Although a sharp separation of the pigment- and ground-layers for the detection of nitrogen by Lassaigns' test in individual layers was not physically possible, it appeared very probable from a positive nitrogen test obtained from the two portions that organic nitrogenous material was present in both the layers. This nitrogenous substance, on further examination, was found to be animal-glue, and a ring, with the characteristic crackle of glue, was obtained from the test of a small specimen of the material soaked in water on a microscope-slide and subsequently evaporated to dryness. The crackle as observed under the microscope is shown on pl. LXVIII D. A size tempera, therefore, appeared to have been employed in the preparation of the ground-coat and possibly in the laying of the pigment-coat. The crackle viewed after the test was observed to have become very faint, almost invisible, when the microscope-slide had stood overnight but could be generally revived by gentle and momentary warming in a low flame.

5. PRESERVATION

The aforementioned investigations into the materials and construction of the paint-system made more or less predictable its reaction to solvents and physical methods which had to be selected for the cleaning and chemical treatment of the stucco. The initial step towards this end was to soften the overlying hardened accretion before its gradual separation could be attempted by gentle rubbing with a brush. Out of a number of solvents tried on obscure points on the paint-layer, a mixture of ethyl alcohol and amyl acetate, in the proportion of 1:4, was observed to reduce materially the stiffness of the extraneous accumulation without catching the paint-layer. After a part of this accretion had been slowly removed with careful manipulation, the object was set to dry in a closed space, after which a further quantity of the deposit, which now appeared to have lost much of its tenacity, could be cleared away with the help of toluene applied with absorbent cotton-swab. It could be easily seen that this treatment might be carried out without in any way affecting the underlying pigment- or ground-layer, since neither the cotton-swabs nor the surface of the stucco bore any indication of the loss of colours during the process. With the volatalization of toluene, however, an opaque film of wax of whitish tint appeared to cover the surface, presumably due to the condensation of moisture on the loss of the solvent. The removal of this whiteness was absolutely essential for watching the progress of the cleaning process, since the pigment- and the ground-layers were almost masked underneath. The employment of solvents with a higher boiling point azeotropic

with toluene was not found to be of much avail, and it seemed that with the loss of the solvent wax was drawn to the surface and presented a white appearance due to the entrapment of tiny particles of moisture. Evaporation of this condensed moisture seemed to be the only remedy for its removal. This was effected by exposing the object in a hot-air incubator at 60° C. for about an hour, when the bloom on the painted surface completely vanished, leaving the surface of the stucco again exposed for visual examination. (It also became incidentally evident that the quantity of wax used in the earlier consolidation of the back of the stucco was considerable: its leaching, in fact, became a matter of importance during the latter stages of chemical treatment.)

The bulk of the extraneous deposits now appeared to have been cleared except for a thin coat of pulverized accretion which still clouded the surface. Elimination of this residuary deposit necessitated further trials with several organic solvents applied with absorbent cotton-wadding over the affected areas. Commercial methanol containing 1-2 per cent ammonia was observed to be efficacious in removing most of this grime and fatty material. However, on account of its water-content, its use was avoided so as not to hazard any dragging of colours or swelling of the remains of the gelatinous binder with the resultant loss in its cohesive power. Even so, the application of solvents was confined to areas over which the pigment appeared to be concealed under the now-translucent accretion and was not extended to the white ground uncovered through the loss of pigments, for any further cleaning of that ground seemed to be hardly necessary. In place of ammoniated methanol, ethylene glycol monoethyl ether and methyl acetate had more or less an equal degree of solvent or softening action on the extraneous residue, the greater part of which, in the solvent-wet condition of the stucco, appeared to have been successfully carried away from its surface.

With the evaporation of the solvent, however, capillary forces again induced the movement of the wax from the interior to the face. At this stage, therefore, it was considered desirable to dewax the body of the stucco as far as possible, since wax appeared to have passed from the back outwards to the paint- or ground-layer, and its general distribution on the surface, apart from imparting dullness to the pigment-layer, was likely to lead the conservator into an error. The results of the search into the chemical nature of the component materials of the painted stucco were again invaluable for finding a solution of this problem. In the light of the available information, two methods suggested themselves. The simpler of the two was to leach out the wax by steeping the stucco in toluene at about 60° C. melting-point of the wax. The other and more elaborate method was to maintain the back and the front of the stucco under a solvent vapour-pressure gradient by the exposure of one of its sides to the atmosphere and of the other to solvent-vapour after it had been immersed in or saturated with the solvent. This would induce the wax to travel in solution to one direction and get deposited on the surface from where its removal offered no difficulties. Although the latter method is necessary when large surfaces have to be undertaken, in the present case, for the size of the stucco, a large glass trough was enough to steep it in toluene and it was felt that such steeping could not expose the paint- or ground-layer or the remains of the gelatinous binding-medium to any harmful manipulation or surrounding. The simpler procedure was, therefore, adopted to achieve the aim in view. On actual working the results obtained seemed to justify this adoption, since, after steeping for about twelve hours in warm toluene, with one change of the solvent during this period, the greater part of the impregnated wax had been leached and the waxy look of the painted face had given way to a more or less earthy lustre noticeable when the solvent had dried out. The tinted wax-composition in the shallow cracks on the chin had also been dislodged, and it became obvious that the filling had extended beyond the confines of the cracks to the outer space. This superfluous wax was

easily removed mechanically, since it split away from the surface of the stucco in thin flakes on the application of a slight lateral pressure. The rest of the disfiguring deposit no longer presented much difficulty in the elimination with solvents used in the earlier stages of the work, with the occasional use of hexane as restrainer. A total sweeping away of the extraneous deposit was neither necessary nor desirable (in fact it might have been even impracticable) for fear of causing possible disturbance to the paint-layer, since the colours now appeared to have been generally uncovered.

This dewaxing left the fabric of the stucco in a weakened condition; nevertheless, in general the ground- and paint-layers appeared to retain a fair degree of coherence, since a small quantity of wax still remained behind after dissolution and prevented the finely-sub-divided materials of the two layers from scaling. However, over some portions of the stucco, mainly near the edges, the loss of wax resulted in the cleaving of the upper clay-coating from the underlying rough mud-plaster; it thus became essential to fix back the detaching or loosened plate-like flakes. This was carried out by means of 5 per cent methyl-methacrylate solution in toluene containing 1 per cent dibutyl phthalate plasticizer introduced with a dropper. The deep crack running across the head under the eye-ball was reinforced by injection with a syringe of 2·5 per cent polymerized vinyl-acetate solution in toluene.

The final step towards the treatment of the paint-layer was the application of 5 per cent vinyl-acetate solution in rectified alcohol with a small sprayer to counter-balance, as far as possible, the dulling effect of the wax on the colours. To some extent, this coating rendered the colours more transparent than before, besides imparting a degree of physical protection to the paint-layer. Pl. LXVII C illustrates the stucco at this stage. Thereafter, the stucco was laid in a backing of plaster of paris as the permanent mount to guard against its breaking into pieces along the large crack. In view of this backing, the consolidation of the body of the stucco with a resinous binder, in place of wax, was considered superfluous and was not carried out. Incidentally, the mount also facilitated the exhibition or safe storage, as required, of the object.

6. ACKNOWLEDGEMENT

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